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ORIGINAL ARTICLES.

GASTRO-INTESTINAL AND HEPATIC DISORDERS, ESPECIALLY CHRONIC GASTRO-INTESTINAL CATARRH, IN RELATION TO THE ETIOLOGY OF SOME CASES OF INSANITY.[1]

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I THINK it is generally admitted by those who have given the subject much thought that in many cases the usually assigned causes of insanity are unsatisfactory and insufficient. Relatives or friends are generally ready with an explanation, particularly when this fits in with some preconceived idea of their own, as, for example, those much-abused causes—religious excitement, disappointment and overwork; but to the student of psychology these are too often inapplicable, if not incorrect. He feels that much is wanting to account for the phenomena witnessed, and that many links in the chain of etiology are missing; but it is not always easy to find these missing links; indeed, the subject is one beset with difficulties. On this matter of exact etiology, both the text-books and asylum reports leave much unsupplied. The list of causes is long enough, but we cannot help feeling that they are too general, and do not meet the requirements of scientific precision.

In connection with the obscure causes of some cases of insanity, it is the purpose of this paper to examine briefly into certain morbid states of the gastro-intestinal tract, of the liver, and of deficient excretion, which seem in the writer's judgment not uncommon but perhaps often unrecognized causes of mental derangement, and especially of melancholia.

In a general way, disturbances of the nervous system arising from derangement of the digestive organs have been recognized from remotest antiquity. It would be superfluous to more than refer to the well-founded connection between dyspepsia and despondency; between so-called biliousness and "the blues," or between prolonged constipation and mental dulness, drowsiness or headache. The derivation of the words melancholia and hypochondriasis sufficiently indicates that the old Grecians were acute observers and believed in such relationship. This association is so quaintly described by that inimitable writer, Sydney Smith, that I shall crave your indulgence for a few moments while I include a short quotation.[1] He says:

"Happiness is not impossible without health, but it is of very difficult attainment. I do not mean by health merely an absence of dangerous complaints, but that the body should be in perfect tune, full of vigor and alacrity. The longer I live the more I am convinced that the apothecary is of more importance than Seneca, and that half the unhappiness in the world proceeds from little stoppages, from a duct choked up, from food pressing in the wrong place, from a vexed duodenum, or an agitated pylorus. The deception as practised upon human creatures is curious and entertaining. My friend sups late, he eats some strong soup, then a lobster, then some tart, and he dilutes these esculent varieties with wine. The next day I call upon him. He is going to sell his house in London and retire into the country. He is alarmed for his oldest daughter's health. His expenses are hourly increasing, and nothing but a timely retreat can save him from ruin. All this is the lobster, and when over-excited nature has had time to manage this testaceous encumbrance, the daughter recovers, the finances are in good order, and every rural idea effectually excluded from the mind. In the same manner old friendships are destroyed by toasted cheese, and hard salted meat has led to suicide. Unpleasant feelings of the body produce corresponding sensations in the mind, and a great scene of wretchedness is sketched out by a morsel of indigestible and misguided food. Of such infinite consequence to happiness is it to study the body."

Of course, this is known to everybody, but a more striking picture could not be presented of the effects of disordered states of the digestive organs on the mind.

To make the subject before us better understood, let us divide it into three parts. In the first, we shall consider the morbid states of the gastro-enteric canal and the liver and also other conditions favoring the accumulation and generation of those toxic agents which we believe to be a prominent cause of the mental disturbance in question. In the second, the absorption of these toxines and their effect on the brain and nervous system generally will claim our attention; and in the third we shall consider the partial retention or retarded elimination of various poisons from the economy and their further cumulative effect upon the brain and excretory organs.

Addressing ourselves to the first part, it is our opinion that chronic gastric and intestinal catarrh, with chronic indigestion in the stomach and intes-

[1] Being the Address in Mental Disorders delivered at the annual meeting of the Pennsylvania State Medical Society at Reading, Pa., June, 1891.

[1] Quoted from Brunton: Disorders of Digestion, p. 45.

tines, is the most constant and responsible cause of derangement of the nervous system. The alteration in the liver is, perhaps, chiefly that of chronic congestion with impairment of its important functions of properly transforming the products of digestion into nutritive fluid, and with deficiency in the secretion of bile.

It may be interesting to consider for a moment the probable origin of these chronic catarrhs. In many there is doubtless a strong hereditary predisposition to them, often strumous in character, which is readily developed by improper food. It is my firm belief, as it is that of others, that many of these ills begin in early childhood and even in infancy, from over-eating, and from badly-cooked or improperly-selected foods, especially hot breads, and that they are perpetuated by a continuance in this unwise course. The result is that in late childhood or early adult years, the boy or girl is a confirmed dyspeptic, mentally and physically handicapped, and illy prepared to endure the hard labor that may fall to his or her lot, or to meet the exactions of a long, rigid educational course, or to satisfy the silly ambitions of parents or teachers, who would have him or her acquire endless accomplishments. There are many other causes of these catarrhal states, but it is not my purpose to consider them here; it is with the condition that we are now chiefly concerned. This established and having become chronic, what occurs? All the functions of the stomach and intestines are of course impaired, digestion is manifestly imperfect, and being retarded is attended with undue fermentations, with putrefaction, and with the evolution of various gases. Under these favorable conditions, bacteria multiply, producing ptomaines, some toxic, some inert. Noxious gases distend the hollow viscera, interfering with peristalsis, and moreover are doubtless often absorbed into the blood. Thus after meals there are constantly present soluble foods, vitiated by myriads of micro-organisms and their poisonous products, and mixed with abundant mucus and altered digestive ferments—a mass ill-fitted for absorption. This, the next step in the digestive process, brings us to the second part of our subject.

Dujardin-Beaumetz[1] in his admirable lectures on "Prophylactic Hygiene," asserts that from these putrefactive changes in the intestinal canal, the system may be poisoned in three ways: first, by the absorption of pathogenic microbes, which he terms a species of auto-infection; second, by the absorption of chemical poisons or alkaloids, formed by the action of these microbes on organic matter, viz., ptomaines, which he designates auto-intoxication; and third, by the combined agency of the pathogenic microbes and their ptomaines, which he calls toxinfections. To these I would add a fourth and a fifth, viz., by the entrance into the blood of various gases, especially sulphuretted hydrogen—a sort of intestinal sewage-poisoning, as Brunton[1] aptly describes it; and fifthly, by the retention or imperfect elimination of the various excretory products of the living cells of the organism, or, in other words, the leucomaines—a species of leucomainæmia, let us call it. Now, these toxic agents first spoken of, or many of them, along with the soluble foods, are absorbed into the blood by means of the veins and lymphatics, and thus enter the portal circulation; but it should not be forgotten that most fortunately they are not yet in the general blood-current; that that grand old organ, the liver, intervenes as a gate-keeper, as Brunton[2] terms it, and discriminates in the most impartial manner. We know that among its other important functions, the liver is a destroyer of alkaloids, and that the bile is antiseptic, thus counteracting the effects of some of these poisons before absorption. Were this not the case, as has been correctly said, we should be in danger of poisoning after every meal. On this subject Brunton further remarks:[3] "Were it not for the power of the liver to obstruct the passage of poisons and destroy them, the alkaloids formed by normal digestion or by abnormal putrefactive processes in the intestines might readily pass to the heart, nervous system and kidneys, and cause dangerous or fatal consequences."

But it is to be noted that, from the great burden thrown upon the liver and from the prolonged irritation in the stomach and intestines, the liver must in time become crippled and unable to separate all the chaff from the wheat. As a consequence there are admitted into the general circulation many micro-organisms or ptomaines or gases, which produce the pernicious effects we are about to describe.

I have no doubt that at times nearly all persons suffer from mild forms or degrees of this toxæmia. Some attacks of headache, vertigo, irritability, drowsiness, insomnia, paræsthesia and various morbid thoughts and impulses are to be ascribed to the temporary absorption of some of these alkaloids or gases, their circulation in the blood and their disturbing effect on the nervous system; but usually these attacks are of brief duration. The diet is restricted and elimination facilitated by a brisk cathartic or a diuretic, and the individual speedily recovers his equilibrium with a corresponding rise of spirits; but let this state of things become almost permanent, let the blood be constantly poisoned by these morbid elements, let the liver fail in its important functions, and the

[1] Therapeutic Gazette, Dec. 15, 1888, p. 802; translation by E. P. Hurd, M.D.

[1] Brunton: Disorders of Digestion, p. 47.
[2] Ibid., p. 47. [3] Ibid., p. 17.

catarrhal conditions become more and more aggravated, and, above all, as is almost certain to happen, let the emunctories be partially closed—is it then a stretch of the imagination to picture such a person, of neuropathic tendency, oppressed by an indescribable gloom, by insomnia or by an apathy that precludes all energetic movement, by dull and persistent headaches, by morbid apprehensions, strange thoughts, impulses or hallucinations, or finally by actual mental perversion and even suicide? It seems to me that this is not an impossibility. Indeed it does occur and I have witnessed it. There is no question but that many strictly nervous disorders are caused or excited by gastro-intestinal derangements of the character indicated. Every neurologist will admit that some of the most obstinate neuroses, some of the most persistent nervous manifestations are directly traceable to these catarrhal states or the reflex irritation to which they give rise. If this be true, is it not evident that in some persons mental instead of nervous troubles may follow from the same cause? Have we any positive knowledge in regard to the specific action of any of these toxines on the cerebro-spinal system? Let us consider first some effects of ptomaines, those alkaloids resulting from putrefaction. We shall bear in mind that some of these are composed of carbon, hydrogen and nitrogen, and others of carbon, hydrogen, nitrogen and oxygen, in various proportions, and that their number is very great. Many are perfectly harmless, but some are exceedingly toxic, and like certain drugs seem to have a special tendency to affect nervous tissue. For example, hydrocollidine, found in putrid fish, produces convulsions. Others, as midatoxine, choline and ethylene-diamine are paralyzers, having an action similar to that of curare. Indeed, many of these putrefactive alkaloids produce effects exactly resembling those of the vegetable alkaloids—atropine, hyoscyamine, cannabine, coniine, etc. Now, it is notorious that the prolonged and excessive use of any of these drugs may cause delusions, delirium or hallucinations, and if persistently administered, even mental derangement. We can readily understand how certain cells or centres of the cerebral cortex, constantly bathed in blood tinctured with these toxic alkaloids, will, according to the excitability of the cells, react to the poison, and in this reaction we venture to include those symptoms characteristic of the mental disturbance; but beyond this, in the present state of knowledge, we are unable to go. We are not yet prepared to state that such and such a form of insanity may result from such and such a ptomaine or several of them, or from such and such a microbe. I know of no researches directly bearing on this point, and regret that I have not myself been in a position to make any experimental studies; but in the etiology of ordinary insanity I believe this is the direction future investigation will take, and I have such faith in this causation, that the proposal of vaccination or preventive inoculation for some forms of this malady will not at all surprise me, and this at no distant day.

If the theory outlined be correct, it may be asked: which of these agencies is the most productive of mental unsoundness, viz.: the microbes, the ptomaines, the leucomaines or the intestinal gases? To this I would reply that probably the ptomaines and leucomaines are the most fertile sources. We know that diseases of microbic origin are more sudden in their invasion, that there is generally but a brief period of incubation, and that the attack is ushered in by pronounced symptoms; but such is not the history of the inception of melancholia. Usually there is an initial stage extending over several weeks or months. There may be improvements, then relapses, and even years may pass before a well-marked attack occurs, which, by suitable treatment, may be averted altogether. This corresponds with what we should expect from a general poisoning of the blood, and from the fluctuations liable to occur under various modifying circumstances; but there are cases of acute mania, or acute delirium,[1] the etiology of which is well explained on the hypothesis of infection, and these are the cases that we believe may be engendered by a pathogenic microbe as specific in its action as the germ of rabies or of tetanus. I may here add that recent researches tend to show that the pathological symptoms in microbic affections result entirely from the chemical poisons elaborated by these microbes; in other words, from the ptomaines, and not from the germs themselves.[2] But this does not render any less important the presence of the microbe as the prime factor. In regard to the agency of gases, especially sulphuretted hydrogen, evolved by these putrefactive changes in the intestinal tract, we have no definite information. Senator[3] "in 1868 related a most instructive case, in which the patient collapsed, and nearly died with all the symptoms of poisoning by sulphuretted hydrogen generated in his own intestines." It is possible that gases, when absorbed, not only add to the contamination of the blood, but in some cases cause special forms of intoxication of nerve-centres.

We come to the third part of our subject, viz.: the more permanent effects of the prolonged retention of these toxic elements in the blood, from deficient excretion, upon the brain and excretory organs. The *rôle* here played by that important

[1] James Hendrie Lloyd: "Acute Delirium." THE MEDICAL NEWS, January 31, 1891, p. 122.

[2] Victor C. Vaughan: "The Chemical Factors in the Causation of Disease." Journal of the Amer. Med. Assoc., vol. xvi. p. 613.

[3] Quoted from Brunton: Disorders of Digestion, p. 47.

group of alkaloids, the leucomaines, is one of great significance. For the sake of simplifying the subject, suppose we let these leucomaines represent that great class of waste products resulting from tissue-metabolism, especially the so-called nitrogenous waste. Now, if to this class we add those substances that have passed through the liver unchanged, or only partly changed, such as peptones, the sugars, albumoses, etc., we shall have an array of toxic agents the circulation of which in the blood may be attended by the most serious results, and in my opinion often by insanity. Vaughan[1] states that Köttnitz, Furstner and others, have, in mental disease, found albumose in the urine. To differentiate between symptoms produced by these substances and those by the ptomaines proper, is, in the present state of knowledge, impossible, but under the former would fall the uric acid irritations, the lithæmias, the uræmic poisonings, the glycosurias, the peptonurias, the albumosurias, the stercoræmias, etc. Though we know little about some of these affections, we do know that a close relationship exists between at least one of them, lithæmia,[2] and mental depression. It must be obvious that the constant presence of some of these poisonous agents in the blood will lead to changes of the most decided character in the quality of that fluid, and that this alteration will affect the nutrition of every tissue. We have just seen how the nervous tissues, the most refined and sensitive of all, are first to react—in functional disturbance for a time, but finally in structural change. Doubtless, here is an explanation of some of the chronic interstitial and meningeal diseases of the brain that underlie the incurable psychoses.

Turning to inquire whether those organs suffer that are chiefly engaged in the effort at elimination which the economy is sure to institute, we find that they do. The skin is usually dry and harsh, the bowels torpid, the fecal evacuations generally scant; but, in my experience, we especially find renal disease.

In the able paper of Dr. Bennett, who last year delivered an address on "Insanity as a Symptom of Bright's Disease,"[3] numerous cases are cited in which mental derangement developed in those suffering from morbus Brightii. It seems to me that the observations then so clearly presented are in a measure supplemented in this paper; that the insanity apparently resulting from "uræmic poisoning," *i. e.*, from insufficient excretion of waste products in those having renal disease, is not primarily due to this cause, but that the blood, being vitiated in the manner described, gradually sets up structural changes in the kidneys, and that their inadequacy precipitates the mental outbreak—the brain perhaps being affected earlier than the kidneys. The subject, however, is so broad and far-reaching that the limit of this address will not permit more than this imperfect outline of it. In closing, I will not consume more time than to briefly point out remedial measures of a general character. Prophylaxis must ever be the leading indication. A study of individual and family idiosyncrasies in respect of foods is of great importance, because here we shall find the chief cause of those gastro-duodenal catarrhs that in after-life may result so disastrously. Dyspepsia in children with an inherited nervous or mental diathesis should, if possible, be prevented, but if not seen in time should be most systematically treated and cured, and recurrent attacks prevented by the strictest dietary. Especially would I urge the denial of starches and sugars, pastries, etc., to strumous and gouty children.

But what course of treatment shall we pursue in those threatened with mental disturbances from the causes here advanced? My plan is, first to regulate the diet and then to aid in the prompt elimination of offensive elements from the blood. To cases of melancholia I frequently give nightly a tablet composed of one-tenth of a grain each of calomel, podophyllin and ipecacuanha, followed in the morning by hot Carlsbad water, or hot Hunyadi Janos water; I may continue this tablet two, three or four weeks. At the same time, special treatment of the catarrhal condition will demand attention. So much has been written in recent years on the subject of gastro-intestinal antisepsis that I shall not occupy your time in going over the subject, except to state that in different cases bismuth, salol, charcoal, naphthol, carbolic acid, etc., have been employed with advantage; and, as advised by Dujardin-Beaumetz, I generally administer these in cachets. Special effort is made to avoid the ingestion of any food or drink likely to lead to undue fermentation or putrefaction. As regards solid foods, when there is a question between the use of the two, I much prefer medium-cooked meats to starchy or saccharine substances. The study of the urine will give us important signs as to the elimination of some kinds of waste, and the necessity for the restriction of such foods as supply this waste in undue proportions.

During my asylum experience I have often averted the impending outbreak of an otherwise mild chronic case by a brisk mercurial, followed by a few doses of compound jalap powder.

[1] Victor C. Vaughan: "The Chemical Factors in the Causation of Disease." Journal of the Amer. Med. Assoc., vol. xvi. p. 699.

[2] A. Haig: "Mental Depression and the Excretion of Uric Acid." London Practitioner, vol. xli. No. 5. J. M. DaCosta: "The Nervous Symptoms of Lithæmia." Amer. Jour. Med. Sci., Oct. 1881, p. 313. Brunton: Indigestion as a Cause of Nervous Depression, p. 233.

[3] Transactions of the State Medical Society of Pennsylvania, vol. xxi. 1889-90, p. 127.

In the London *Lancet*,[1] in 1889, a very suggestive case was reported by Dr. E. F. Willoughby, in which acute maniacal symptoms, occurring in a man about fifty years of age, were promptly controlled, and his reason restored within twelve hours, by copious diaphoresis from a hypodermatic injection of pilocarpine. Chloral and bromide had failed to procure sleep, which at once followed the use of pilocarpine. Cases like this indicate that diaphoretic elimination may be a potent factor in the treatment of some acutely maniacal patients.

I have had no experience in the matter of gastric lavage or irrigating the stomach by weak antiseptic solutions as a means of controlling putrefaction in that viscus, but would not hesitate to resort to it in appropriate cases. Dr. Frank Woodbury, in his interesting paper on "Infectious Dyspepsia and its Rational Treatment by the Antiseptic Method,"[2] refers to one case of incipient insanity in his practice apparently arrested by this agency.

In cases of mental disorder arising from renal disease, and deficient excretion by this channel, a milk diet, diuretics and diaphoretics will often give the most gratifying results. An elderly woman, now under treatment, whose mind became deranged from this cause, recovered her reason very promptly after taking an ounce and a half of compound jalap powder in doses of thirty grains every two hours. This did not produce catharsis, but proved abundantly diuretic and slightly diaphoretic.

VENESECTION IN CARDIAC AND ARTERIAL DISEASE.

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OWING to the discredit into which the practice of venesection has fallen during the last thirty years, one, at the present day, is almost expected to offer an apology for bringing the subject before a medical society. Such an apology exists in the fact that quite recently an interest in the subject has been revived, and at meetings of various medical societies and in current medical literature venesection has been discussed. Special reference may be made to a paper by Dr. Pye-Smith,[3] on "The Therapeutical Value of Venesection; Its Indications and Its Limits," read and discussed at a meeting of the Royal Medical and Chirurgical Society of London.

In this paper are recorded nearly fifty cases in which venesection had been practised in many different forms of disease, including bronchitis, broncho-pneumonia, croupous pneumonia, miliary tuberculosis of the lungs, thoracic aneurism, valvular disease of the heart, pericarditis, Bright's disease, apoplexy and epilepsy. The writer considered the indications for venesection in the order of their importance to be: First, cyanosis, with dilatation of the right side of the heart, whether from pulmonary or from some other form of obstruction to the circulation; secondly, the intense pain of thoracic aneurism; thirdly, uræmic and prolonged epileptic convulsions. Reference was also made to bleeding in fevers and inflammatory disorders. In the discussion that followed, the opinions expressed were in the main corroborative of the conclusions reached by the writer of the paper.

Since the opening of the Johns Hopkins Hospital, in May, 1889, we have had occasion to practise venesection on five patients, an account of which is subjoined.

CASE I. *Thoracic aneurism; venesection for urgent dyspnœa with cyanosis; temporary relief followed by death from exhaustion.*—William W., seventy-three years old, was admitted to the Johns Hopkins Hospital on May 18, 1889. He had been ailing for some months with cough, shortness of breath and pain in the right side of the chest and right shoulder; on admission he was found to present the signs of aneurism of the ascending arch of the aorta. He complained especially of shortness of breath and of intense pain over the right breast and down the right arm. With rest in bed and the use of iodide of potassium he improved slightly and the intense pain was somewhat alleviated, but at night he still suffered very much from dyspnœa and cough, for which morphia had to be used freely. On the evening of May 29th he had a more than usually severe attack of shortness of breath, accompanied by marked cyanosis and distention of the cervical veins. As his heart was beating strongly and regularly, it was considered that venesection would give him at least temporary relief, and, accordingly, fourteen ounces of blood were withdrawn from his right arm. This afforded him temporary relief: both the cyanosis and the dyspnœa became less, and he spent a more comfortable night. Shortly after the bleeding he had a profuse perspiration. He died from exhaustion two days later. The autopsy revealed a large saccular aneurism compressing the right lung, which was the seat of a chronic interstitial pneumonia.

CASE II. *Chronic nephritis, with dilated heart; extreme cyanosis; venesection, with temporary relief; death.*—Jeremiah B., forty-one years old, was admitted to the Johns Hopkins Hospital February 5, 1890. His illness had commenced six months before with shortness of breath, and three months later he had noticed that his legs were swollen. During November he had improved slightly, but since that time both the dropsy and the shortness of breath had gradually increased until the œdema involved his abdomen and arms. He had not noticed any change in the quantity or appearance of his urine. The condition of the patient on admission was as follows: Very plethoric and stout; general anasarca; respira-

[1] The London Lancet, No. 21 of vol. i., 1889, p. 1030.
[2] Journal of the Amer. Med. Assoc., vol. xv. p. 598.
[3] Abstracted in the Brit. Med. Journ., January 31, 1891.

tion a little labored, 44; pulse, 108, regular; no increase in tension. There was slight lividity of the lips and tips of the fingers and of the ears. The venules of the cheeks and nose were distended. There was a diminution of the area of lung resonance in the lower thorax in front, in the axillæ behind, and the breath-sounds at both bases were enfeebled. The cardiac dulness began at the third rib, but the inferior and lateral limits could not be made out. There was gallop-rhythm at the apex, a moderately intense systolic murmur in the anterior portion of the axilla, with accentuation and reduplication of the second sound at the pulmonary cartilage. The abdomen was very large, but there was so much fat that it was not possible to demonstrate any ascites. The urine was diminished in quantity, of a sp. gr. of 1028, and contained albumin and fatty, hyaline and granular casts. The patient was freely purged with salts and given half an ounce of the infusion of digitalis every four hours. During the next three days the urine progressively increased in quantity, the dropsy was slightly diminished, and the heart-sounds became more distinct, though the pulse remained rapid. At midday, January 10th, after coughing up some bloody sputum during the morning, he had a severe attack of dyspnœa, and when seen a few minutes later he was extremely cyanotic, the veins of the neck well distended, the breathing feeble and shallow, while the pulse could not be counted at the wrist. The heart-sounds were rapid and indistinct, and there was tremor and jactitation of the extremities. Venesection was deferred until 2.15 P.M., when eighteen ounces of blood were withdrawn. The relief was immediate, the breathing becoming easier and the cyanosis disappearing almost entirely. There was no return of the cyanosis or dyspnœa, but the patient died on the morning of the next day. An autopsy could not be obtained. It is probable that there were extensive hemorrhagic infarctions of the lungs.

CASE III. *Mitral regurgitation, with a dilated heart, irregular in action; cyanosis and dyspnœa; venesection, with marked relief; sudden death from syncope, six days later.*—Mark W., twenty-two years old, was admitted to the Johns Hopkins Hospital June 17, 1890. He had had three attacks of inflammatory rheumatism, the first occurring four years before, but had not shown any symptoms of cardiac mischief until three months previously to admission, when he began to be short of breath and to have palpitation on slight exertion. He had also suffered from vertigo and slight cough; his legs had been swollen for some days, and he was passing less urine than usual. Condition on admission: Face pale; slight blueness of finger-nails; œdema of the legs. There was orthopnœa. Respirations, 27. The pulse was intermittent, 36 per minute, only two out of a series of three beats of the heart reaching the radial pulse. There was slight impairment of resonance at the base of the right lung, with enfeebled breath-sounds. The whole of the left side of the chest was lifted with the cardiac systole, and there was throbbing in the neck and at the epigastrium. The apex impulse was forcible and diffused in the sixth intercostal space outside the nipple line. The area of cardiac dulness was increased in both diameters. There was irregularity in the rhythm and intensity of the cardiac beats, a loud whiffing systolic murmur at the apex, and marked accentuation of the second sound at the pulmonary orifice. The patient was ordered sulphate of strychnia, gr. $\frac{1}{30}$ t. i. d.; ten days later sparteine, gr. $\frac{1}{4}$, was substituted for this. There was some improvement in the pulse and the œdema partially disappeared.

On July 4th there were considerable cyanosis of the hands and lips, free perspiration, but not much dyspnœa. The pulse was very small and in marked contrast to the heaving impulse in the præcordial region. The heart's action was very irregular. Fifteen ounces of blood were withdrawn from the left arm. On the following morning the color of the patient was much better, the pulse was 96, of fairly good volume, the heart's action only slightly irregular, and there was no longer such disproportion between the cardiac systole and the pulse. The improvement continued until six days later, when the patient died suddenly in a syncopal attack. An autopsy could not be obtained.

CASE IV. *Arterial sclerosis; cardiac hypertrophy and dilatation; venous engorgement, with slight cyanosis, stupor and delirium; venesection; recovery.*—David B., fifty years old, was admitted to the Johns Hopkins Hospital December 16, 1890, suffering from cough, shortness of breath and dropsy, dating from fourteen weeks before entering the hospital. At that time he had been suddenly seized at night with shortness of breath and cough, and latterly the dyspnœa had been constant, with progressively increasing dropsy, with decrease in the quantity of urine passed daily. There had also been slight transitory mental disturbance. There was no history of rheumatism or syphilis. On admission he presented the following condition: Œdema of the lower extremities and of the right side of the trunk (he had been lying for some time on the right side); pulse, 116; vascular tension increased; respirations 44, breathing of the Cheyne Stokes type. There were bronchial râles at the bases of both lungs, but no dulness. The apex-beat was neither visible nor palpable, and the superficial area of cardiac dulness was not increased. There was fœtal heart-rhythm at the apex and gallop-rhythm at the fourth rib. There was no accentuation of the aortic second sound. The urine contained a small percentage of albumin, with a few hyaline and granular casts. With the use of digitalis, free purgation with salts and an occasional hot bath, the œdema rapidly subsided and the pulse became slower and of better volume. He still suffered from dyspnœa, however, and at night was very restless and slightly delirious. On December 23d he was not so well. His tongue was dry, his pulse more rapid and occasionally intermittent, and even in the daytime there were drowsiness and rambling. There was in addition considerable venous engorgement of all the superficial veins, with slight cyanosis and extension of the cardiac dulness to the right of the sternum. At 3 P.M. sixteen ounces of blood were taken from his left arm; the venous engorgement was lessened in a marked degree; the patient was restless until 3

o'clock in the morning, when he fell asleep. On the next day he was quite rational; there was still some dyspnœa, but his pulse was 96 and regular. During the three days following the bleeding he passed a very large quantity of urine. On January 7th he was quite free from dropsy, his mind was clear, he slept and ate well, and his pulse was regular, ranging from 60 to 70. He was discharged on this day at his own request. Three months later he called at the hospital and stated that he felt quite well and was at work.

CASE V. *Mitral regurgitation, with dilated and irregular heart; extreme cyanosis; venesection; recovery.*—John B., forty-four years old, was admitted to the Johns Hopkins Hospital April 13, 1891, suffering from dropsy and shortness of breath. In the autumn of 1889 he had for three months suffered severely from inflammatory rheumatism, all his larger joints having been swollen and very painful, and in the same season of 1890 he had had an attack of typhoid fever. He gave no history of venereal disease. Four weeks before his admission to the hospital he had noticed that his feet were swollen. The dropsy increased rapidly; two weeks later he was quite short of breath—so much so that if he attempted to lie in bed he would choke. He had not complained of palpitation, his bowels were regular, and he passed about the same quantity of urine as usual. When seen, shortly after his admission to the ward, he was found to be cyanotic, sitting up in bed, and somewhat breathless. His pulse was from 90 to 100, small and irregularly intermittent. There was a wide area of heaving cardiac impulse, the apex beat being three fingers' breadth outside the left nipple. A loud, blowing, systolic murmur was heard at the apex, and was transmitted into the left axilla. The second sound was accentuated at the left border of the sternum. The lungs were clear, with the exception of a few mucous râles at the bases. There were enlargement of the liver, without ascites, and considerable œdema of the lower extremities. The urine was scanty, highly colored and albuminous; it contained some hyaline and finely granular casts. A milk diet, free purgation with salts, and tr. digitalis, ♏ xv. 4 q. h., was ordered. At midnight he was very cyanotic and breathing heavily. The radial pulse was just perceptible, only one heart-beat in every four or five being felt at the wrist. The præcordial impulse was heaving and irregular, and the heart sounds were loud. A bleeding of eighteen ounces produced immediate relief. The dyspnœa disappeared almost entirely, the cyanosis diminished, the pulse at the wrist increased in volume and frequency, and the patient was relatively comfortable for the remainder of the night. The next morning he was looking well, and sitting up in bed. There were still a little shortness of breath and blueness of the lips and finger-tips. The pulse was 96, of fairly good volume, but still irregularly intermittent. The upper limit of the cardiac dulness was at the third rib; transversely it extended from the right border of the sternum to the apex-impulse in the sixth intercostal space. There was some engorgement of the veins at the root of the neck. The auscultatory phenomena on the part of the heart and lungs were as described, and there was a slight elevation of temperature. The digitalis was discontinued, and was again given on the following day in smaller doses; two days later strychnine and strophanthus were substituted for it. From April 15th to May 1st there was irregularity in the volume of the individual beats, but no intermittency, and the urine was free from albumin and casts. On May 6th, after having been up and about for a week, he was feeling quite well. There was no œdema, lividity or shortness of breath, and he ate and slept well. The radial pulse was 80, small, irregular and once more occasionally intermitting. There was still a marked contrast between the force of the ventricular contraction and the volume of the pulse. The physical signs were not materially different from those observed the day after the bleeding. He was discharged from the hospital on May 6th.

The reported cases illustrate the value of bleeding, as a means both of affording temporary relief from distressing symptoms due to disturbances of the circulation and also of saving life and even restoring patients to comparative health. There is little to be added to Dr. Pye-Smith's conclusions as to the indications for venesection and its relative value in the various classes of cases which require its performance. Our experience has been, with one exception, limited to cases of primary cardiac or arterial disease, which are undoubtedly those in which most good may be expected from its use. Huchard[1] advocates small bleedings from time to time in the first stages of arterial sclerosis, and thinks that in this way it may be possible to lessen and even delay the evils resulting from prolonged high vascular tension. He insists particularly on the value of venesection in the later stages of the same disease, when the left ventricle is no longer able to cope with the increased peripheral resistance and volume of blood and the heart is in danger of sudden arrest. This may occur even when there is but little œdema or cyanosis, though there is usually engorgement of the right side of the heart and of the veins. In addition to its purely mechanical effect, venesection removes from the blood a considerable amount of toxic material which has accumulated in it owing to the imperfect performance of the functions of the kidneys and liver, these viscera being usually more or less affected by the general arterial sclerosis. The contra-indications to venesection in cardiac and arterial disease are few. Even when death is imminent the rapid abstraction of some ounces of blood not infrequently saves the patient. It is obvious that when marked ascites or pleural effusion coexists with cyanosis and distressed breathing the abdomen or the pleura should be tapped, and venesection delayed until it is ap-

[1] Huchard: Maladies du cœur et des vaisseaux. Paris, 1889.

parent whether either of these procedures will or will not afford relief. Large hemorrhagic infarctions of the lungs and extensive disease of the myocardium or of the coronary arteries, could such conditions be definitely ascertained, would probably be contra-indications, as even temporary relief could hardly be expected under such conditions.

CEREBRAL SURGERY.

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IN this day of surgical progress, operations of unheard-of magnitude are undertaken in regions of the body not long ago supposed to lie without the operative field. Especially is this true of diseases of the nervous system, which have heretofore been regarded as not amenable to treatment, but which are now removed or relieved by the surgeon's knife. The experimental researches and clinical observations of Ferrier, Horsley, Fritsch and Hitzig and others, have established the essential principles of cerebral localization, which, together with modern antiseptic and aseptic methods, have made it possible for the surgeon to invade diseased or injured brains. Brain surgery, although in its infancy, has been very progressive, until now the inaccessible areas of the brain have been narrowed down to the central regions of the base and the bordering convolutions, the corpora quadrigemina and the pons oblongata. (Charles K. Mills, *Brain*, July 18, 1889.)

The neurologist has been foremost in the diagnostic study of intra-cranial disease, but the fearless surgeon, with his technical skill, shares with the neurologist the rewards which have followed the united efforts of both in placing scientific cerebral surgery upon a firm and practical basis. My aim in this paper is to give a general review of what has been done in cerebral surgery. It is understood that the reader is cognizant of the principal facts pertaining to the surgical anatomy of the skull and brain, and it only necessary to add an outline of the established facts in cerebral localization.

The anatomy of the brain is still very defective, and the application of localization is exposed to much error; but from the results obtained by experimentation, clinical experience and pathological data, we are justified in drawing the following conclusions respecting the cells of the cerebral cortex: (1) The surface of the brain is the seat of all conscious mental action. Here, and here only, do impressions made upon the special senses become transformed into conscious appreciation of external objects. (2) The mental powers are represented by different combinations of memories of past events, stored in cells related to the special senses, and by the activity of other groups of cells that are probably situated in the frontal lobes. (3) The central convolutions of the brain (a part of the frontal and parietal lobes of each hemisphere) preside over motion and the memory of all motor acts of the limbs and body. The upper part governs the legs chiefly, the middle controls the upper extremity, while the lower presides over the complex movements of the tongue and lips necesaary to speech. The theory of centres exactly limited is probably not correct, for we have evidences of substitution of function when one centre is destroyed and its work is taken up by another. (4) The occipital lobes preside over the sense of sight and the memory of sight-pictures. Hallucinations of vision point strongly to a disturbance of function of the cells of these parts. (5) Parts of the parietal lobes not occupied by special centres of motion are probably associated with conscious perception of tactile impressions. (6) The temporal lobes are the probable seat of conscious appreciation of sounds, odors and taste. When these lobes are diseased, the memory of spoken words may be obliterated and hallucinations of hearing or deafness may be developed.[1] (7) The functions of other nerve-cells of the cortex are more or less open to controversy, while the functions of the cerebellum, pons Varolii and medulla oblongata are too complex to be fully discussed here. The region which concerns us most in the application of the principles of cerebral localization is the Rolandic zone or motor area. Diseases of the brain, situated in this locality, are more readily diagnosticated and are more amenable to treatment than when seated in any other region. The symptoms of localized cortical disease are divided into two classes, those caused by destruction and those caused by irritation. Destructive lesions produce paralysis, inhibit or obliterate sensation and impair the special senses. Irritative lesions produce spasm, tremor, contractions, hyperæsthesia, anæsthesia, pain and hallucinations of the senses. There are symptoms of a diffuse nature common to both forms of lesions, viz.: Headache, vertigo, vomiting, psychical changes, choked disc, coma.

In diagnosticating intra-cranial disease we must study each symptom separately and in association with others. In cerebral disease especially is diagnosis by exclusion unsatisfactory for surgical purposes. Familiarity with the cranio-cerebral relations is important. It is to-day an undisputed fact that every part of the cranial surface corresponds to a definite part of the cerebral surface. Therefore, to determine the location of our principal landmarks, so that we can undertake to map

[1] Ranney: Nervous Diseases, 1889.

out smaller areas, we must study the topographical relations of the cranium to the convolutions. Several methods have been suggested for establishing rules to guide us in localizing the fissures and convolutions. Hare's method seems the most practical and accurate. Dana (*Medical Record*, January 12, 1889; *Journal of Nervous and Mental Diseases*, June, 1890) has very explicitly given working rules for practical cranio-cerebral topography. By the aid of the cyrtometer we locate the principal landmarks, and from these we determine the other localities and areas. We can now understand the relations of surgery of the brain to the practical principles of localization and topography. Their application serves in the diagnosis and treatment of the various diseases of the brain coming within the domain of surgery, of which we may mention abscess, compression, tumor, cyst, fractures, hemorrhage, epilepsy, microcephalus, hydrocephalus, insanity and general paralysis.

The indications for surgical interference in cerebral disease are divided into two classes: (1) the existence of pressure symptoms, as in abscess, tumor, effusion, hemorrhage, etc.; (2) the existence of functional disturbances, such as epilepsy, inveterate headache, insanity, etc. (Keen). As a preliminary to all operations on the central nervous system, preparations should be made for several days previous to the operation in order to avoid shock, which is especially great in diseases of the nervous system (Dercum). Cerebral surgery is apparently the most difficult of all forms, and to succeed one must have a thorough knowledge of the technique. To the surgeon properly belongs the discussion of such procedures, but as any one of us may at any time be called upon to use the trephine, some consideration of this all-important operation in cerebral surgery—trephining—should be made here. "We are now," says Roswell Park,[1] "in a position in which we can boldly affirm, even in courts of law, that trephining, when properly done, is not of itself a dangerous operation. The condition which necessitates the operation constitutes the main element of danger. It is indicated in simple fracture with compression, compound fracture with depression, fracture associated with punctured or gunshot wounds, even in the absence of symptoms; coma, with signs of compression or contusion; laceration of soft parts, without fracture of the external table; hemorrhage, abscess, tumor, bone-abscess in the frontal sinus or mastoid process, purulent meningitis, acute infectious osteo-myelitis of the diploë, epilepsy, etc."

The Operation.—First of all, aseptic conditions must be established; the patient's scalp must be carefully shaved and cleansed. If no open wound exists, an incision, preferably U-shaped, should be made, so that perfect drainage will be assured when the patient lies on his back. The pericranium is then elevated or scraped back over the area of bone to be removed. The trephine should not be applied over vascular areas. The opening may subsequently be enlarged in any direction.[1] When it is intended to replace the button removed, it should be placed between folds of antiseptic gauze, and kept in a 2 per cent. solution of carbolic acid at a temperature of from 100° F. to 104° F. Before replacement a little notch should be cut for drainage, the pericranium sutured, and the scalp closed in the usual manner. Several methods have been proposed for filling openings made in trephining: re-implantation of the button, as suggested by Macewen; transplantation of bone from other parts of the patient (Seydel), and transplantation of bone from one animal to another. In either method, if the operation has been aseptic throughout (and in this branch of surgery it should be so more than in any other) perfect bony union will have taken place in a few days.

Trephining, when indicated, should be done early. In fracture of the skull, surgical interference is only justifiable when some well-pronounced or grave cerebral disturbance results. Then we may trephine and elevate the bone at the seat of pressure, or where the inner table, from its brittleness, may have become separated, with or without external fracture and injury to the brain.

In contusion of the brain we have, with the possible exception of cranial fracture, the most frequent cause of death as a result of injuries of the head as a class. In a paper read before the New York Medical Association last year Dr. Phelps thus summarizes his conclusions regarding cerebral contusion: "It may be either direct or by *contre coup*, and may be either limited or diffuse or attended by hemorrhage upon the surface of the brain. This last form may cause death by compression. The limited or diffuse form may cause early death by consecutive general hyperæmia, or later by the formation of cerebral abscess. The symptoms resemble alcoholic intoxication, for which the condition is usually mistaken.

Keen advises trephining when encephalitis follows contusion. He says: "We should treat such an inflammation precisely as we would treat it in other regions of the body, always remembering that in the brain, by reason of the bony case in which it is retained, it is impossible for an exudation or hemorrhage to find its way to the surface without surgical assistance." We should treat fractures of the vault without depression expectantly, but when encephalitis occurs the trephine should be used. Keen advises immediate preventive trephining when

[1] Roswell Park: Ref. Hand-book.

[1] Roswell Park: Med. Record, September 22, 1888.

depression exists; the harmlessness of trephining by modern methods is so assured that no patient should be exposed to the risks of immediate or remote consequences. In fractures of the base Nancrede[1] says: "In addition to elevation, disinfection and removal of fragments, we should fill by insufflation and packing all accessible localities." Fractures of the vault in children are of grave consequence. Simple fracture, involving the membranes and brain, may be attended by one of two possible complications, viz., a cranial gap, with the brain in direct apposition with the bone, pulsating at the bottom of the opening, or a false meningocele; the watery tumor may communicate with the interior of the skull, or the opening may close by bony or fibrous union. Meningocele may complicate simple or compound fracture or follow trephining or other operation on the brain. The presence of meningocele is proof positive that the lateral ventricles have been involved.[2]

Pressure exerted by cranial tumors is indicated by headache, vertigo, vomiting, epileptiform convulsions, apoplectiform attacks, psychic disturbances and choked disc. Headache is generally localized and usually frontal. It is often related to the seat of the tumor. In several cases coming under my observation I have seen persistent headache, with nocturnal exacerbations.

Vertigo is not always present. It is most frequent when the cerebellum is involved. Vomiting may be a pronounced symptom, but it occurs principally in cerebellar disease. The cerebellar gait, the vertigo, the vomiting and subsequent coma, with associated paretic symptoms, led me in one case to diagnosticate tumor. Death occurred, and post-mortem examination showed cerebellar abscess. Epileptiform and apoplectiform seizures are quite frequent, and are characteristic symptoms of tumor. Transitory hemiplegia may follow the apoplectiform attacks, especially when in association with gummatous tumors of brain. The psychic changes are principally of the maniacal or melancholic forms of insanity. Choked disc, when present, is more nearly a pathognomonic symptom of cerebral tumor than any other (Jacobi). Tuberculous tumors are not suitable for operation. Gliomata, when not vascular and rapidly growing, admit of ready removal. Cysts are favorable for operation. Fibromata of the membranes are most amenable to treatment. Sarcomata and carcinomata are not. Gliomata are usually seated in inaccessible regions of the gray matter and are apt to give rise[3] to apoplectiform attacks. Cerebellar tumors are not favorable for operation.

Cerebral abscess occurs chiefly in the temporo-sphenoidal lobe, or in the cerebellum, or in both together, as I have observed. The abscesses may be single or multiple, and acute or chronic. They are caused principally by extension of disease from the middle ear, or by traumatism; they may be secondary to erysipelas of the face or scalp or to the eruptive fevers. The symptoms are vertigo, anorexia, chills, elevated temperature, accelerated pulse, etc., cephalalgia, insomnia, disturbance of equilibrium; percussion may elicit sensitiveness over the region of the abscess. It is difficult to diagnosticate abscess, as I know from experience; the only certain method is by the use of an exploring needle in the region of its supposed existence. As a rule, the pressure symptoms will enable us to localize it. The treatment is to evacuate the abscess by trephining above and behind the ear, according to rules laid down by Bergmann. Macewen makes a second opening on a line with the bottom of the abscess. Nancrede[1] indorses this treatment, saying that it is necessary to facilitate drainage in washing out the abscess. A weak bichloride solution should be used.

The operation of linear craniotomy for microcephalus has been performed in this country, first by Keen,[2] later by Wyeth.[3] Lannelongue, of Paris, was the first to operate for the relief of this disease. His first case was greatly improved, but the intellectual acquirement was in a great measure due to the training received in the hospital. Wyeth's case improved quite markedly. I have not learned the results in Keen's case. All cases of microcephalus are not amenable to such treatment, for microcephalic brains show the effects of two entirely different conditions—premature closure of the sutures, which checks the active growth of the contained brain, and cessation of the growth of the skull because the brain from some cause has ceased to grow, the skull no longer receiving the stimulus of the growing organ within.[4] In the first class of cases an operation would no doubt relieve the conditions producing imbecility and allow the enfeebled brain to attain a larger and more natural growth; but the second class of cases would not be benefited in the least. My experience as assistant physician in the Pennsylvania Institution for Feeble-minded Children has led me to believe that whatever benefit cases of microcephalus would derive from such a surgical operation would be due to methodical and persistent training such as is pursued with all feeble-minded children. Such a child would, at best, in intellectual acquirement never approach a normal child of the same age.

[1] Keating's Cyclopædia of Diseases of Children.
[2] Dr. F. Hober: American Pædiatric Society, July, 1890.
[3] Annual, 1890.

[1] Keating's Cyclopædia of Diseases of Children.
[2] THE MEDICAL NEWS, November 29, 1890.
[3] Medical Record, February 21, 1891.
[4] A. W. Wilmarth: Alienist and Neurologist, October, 1890.

Hydrocephalus has been operated upon with more or less success. There are two varieties—external (when the effusion is in the sub-arachnoid space), and internal (when the effusion is in the ventricles). Conner[1] advises in external hydrocephalus that only a moderate amount of fluid be drawn off at a time with an aspirator. For internal hydrocephalus Keen has devised an operation for draining the ventricles, which is briefly as follows: Lateral trephining, large opening one and one-quarter inches behind the auditory meatus and one and one-quarter inches above Reid's base line; puncture at a point two and one-half inches directly above the opposite meatus.[2] The puncture opens into normal lateral ventricles. The objection to this operation, says Conner, is the reaccumulation of fluid which invariably follows. Of the seven cases reported up to September, 1890, five had died, showing a high rate of mortality; but Keen does not regard this as discouraging, considering the danger of the primary condition. An interesting case is reported by Ayres,[3] in which paracentesis was done for internal hydrocephalus. The child was a blind imbecile. Great improvement followed the operation. The eyesight was restored, the mental condition improved, but the child could not talk. The subject of tapping the ventricles was last year discussed before the British Medical Association. Mayo Clark regarded the operation as justifiable in cases in which coma developed. Wheelhouse, of Leeds, said that the operation should not be done in chronic hydrocephalus. When the operation is performed it should be done with strict antiseptic precautions.

Gunshot wounds of the skull and brain have interested surgeons since the invention of gunpowder. In this day of perfected firearms they are troublesome, severe and dangerous. Professor Bryant, of New York, states that the mortality depends greatly on the removal or non-removal of the foreign body; recoveries are greater by 17 per cent. when foreign bodies are removed. This applies especially to the frontal, parietal and temporo-sphenoidal lobes. When a bullet lies above the plane of the lateral sinus the chances of recovery are fair; but when below, death is inevitable. When the cerebellum is injured, death is the usual result, irrespective of treatment. It is often very difficult to locate the bullet in the brain. Numerous instruments have been devised; none, perhaps, is more simple or more satisfactory in action than the telephonic probe devised by Dr. John Girdner, of New York. It is not universally used because the Bell Telephone Company will not permit its manufacture. The improvised instrument is used as follows: One copper wire is attached to a probe, the other to a piece of metal held in the patient's hand, and an ordinary Bell telephone receiver is placed to the ear. The metal plate should be of the same material as the probe. When the probe comes in contact with the bullet a signal is given. The signal was given in all of eight cases examined with this instrument.

Hemorrhage, either arterial or venous, arising in the course of intra-cranial operations is often troublesome. In the surgery of the skull it mostly takes place in two situations, viz.: externally or internally to the broad aponeurosis of the scalp and in the sub-aponeurotic fossæ; in the latter bloody effusions, hæmatomata, are most frequently met.[1] Bleeding from the diploë may be troublesome, but it can be controlled by pressure or by plugs. Intra-cranial hemorrhage may prove serious from its location and duration. It may be supradural, subdural, cortical and intra-cerebral. Supradural and subdural hemorrhage is usually associated with fracture. Cortical or subcortical hemorrhage has its source in the cerebral arteries and most frequently in the cortical system of the middle cerebral.[2] Cortical hemorrhage is rare, meningeal hemorrhage frequent. Intra-cranial hemorrhage is becoming more and more subject to treatment at the surgeon's hands. When subdural or epidural, the clot will not be absorbed, and surgical interference is justifiable (Dennis). Manley is convinced from experience that in cases of cranial lesions attended with intra-cranial hemorrhage, trephining and displacement of the clot are illogical and constitute dangerous practice[3] unless there are well-defined indications. Osler says that intra-cranial hemorrhage, not traumatic, is beyond the province of surgery; while Chambonier[4] gives reports of thirty-one cases of non-traumatic hemorrhage operated upon by him without a death. He also states that hemiplegia and muscular contractions have been relieved by the removal of old clots. The symptomatology of hemorrhage is briefly as follows: Motor and sensory paralysis, varying in extent, duration and degree; disturbance of consciousness and of the special senses; abnormal attitude of the head and eyes; tremor; changes in the pulse, pupils, temperature and respiration; abnormal phenomena of the bladder, rectum and kidney; and mental impairment.

Starr says that no definite statements regarding the advisability of surgical interference in Jacksonian epilepsy can be made. We may relieve, but in no case can we promise cure.[5] To afford relief

[1] Keating's Cyclopædia of Diseases of Children.
[2] W. W. Keen: Medical Record, September 20, 1890.
[3] Pittsburg Medical Review, March, 1890.

[1] T. H. Manley: Brooklyn Medical Journal, October, 1889.
[2] C. K. Mills: Brain, July, 1889.
[3] Trans. New York State Medical Association, October, 1890.
[4] Guillard's Medical Journal.
[5] Starr: Familiar Forms of Nervous Disease, 1890.

in epilepsy, trephining has been done since prehistoric times, but it is as yet by no means established in what degree it has proved successful as a curative measure. The actual number of cases of traumatic epilepsy is not as great as statistics would lead us to believe. Fits may cease for a longer or shorter period after trephining, just as they do after almost any surgical operation, to return with usual or increased severity. Ferrier[1] says that at least one year should elapse without recurrence of fits before it would be safe to pronounce a case cured. In conducting the operation it is often impossible to recognize the sulci and convolutions and to locate the discharging lesion. In such case resort may be had to the faradic current, which, when weak, does no harm to the cortex. Keen has devised for the purpose an electrode which is as unique as it is serviceable. Hughlings-Jackson advises that in all cases of focal epilepsy, depending on organic disease or not, the discharging lesion should be excised. In all cases excision should be as complete as possible, and all irritable portions of the brain cortex be removed to prevent the recurrence of spasms. Spasms occurring after such a precaution has been taken are a result of the epileptic habit or of irritability and instability of neighboring centres.[2] When brain pressure exists after trephining, the button of bone is left out. Marked amelioration has followed such procedure.

Operations for the relief of insanity and general paralysis have been undertaken, but with no great success. In general paralysis three operations have been reported—two in England by Drs. Shaw and Cripps,[3] and one in this country by Dr. Charles G. Wagner,[4] of Utica, N. Y. Temporary improvement followed in all, but death ultimately resulted at periods varying from a few weeks to a few months. Dr. Wagner admits that, while the utility of the operation is not fully established, yet he regards the improvement which followed in the cases operated upon as a warrant for further trial of trephining in general paralysis.

In summing up what can be done in cerebral surgery I will quote the conclusions of a report read before the International Medical Congress, 1890, by Victor Horsley, of London, one of the foremost surgeons and experimenters in this line of work:

1. Operation should be done in every case of brain injury. It is the only means of restoring the patient to a normal condition and may prevent epilepsy and dementia.

2. In every case of intra-cerebral hemorrhage, seen within four hours of the apoplectic attack, the common carotid artery should be tied.

3. Trephining should be done in cases of headache refractory to all other measures.

4. Cerebral gummata should be removed; iodide of potassium palliates but does not cure them.

5. Tubercles should be removed when practicable.

6. Operation should be performed when other tumors are present, even when multiple, if relief is not obtained from other measures in six weeks.

7. Operation should be performed for athetosis and other spasmodic affections.

8. Operation should be performed for Jacksonian epilepsy, after first testing the cortex with the faradic current to locate the point of origin of the convulsion.

9. Operation should be performed for fracture of the vertebral column when compression exists.

10. Operation should be done for paraplegia from spinal caries.

Horsley represents aggressive cerebral surgery. Perhaps he is an extremist, or possibly we have not yet awakened to the possibilities of operative surgery in diseases of the brain and spinal cord.

[1] Ferrier: Brain, July, 1889. [2] Ibid.
[3] British Medical Journal, November 16, 1889; June 14, 1890.
[4] American Journal of Insanity, July, 1890.

RENAL DISEASE AND URÆMIA ATTENDING ACUTE FACIAL ERYSIPELAS.

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THE following case demonstrates the relation of acute facial erysipelas to disease of the kidney, and shows the necessity of paying the most careful attention to the renal function in acute erysipelas:

Mrs. G., aged fifty-seven years, tall and of good physique, weighing 165 pounds. Thirty years ago had an attack of inflammatory rheumatism, followed by an aortic regurgitant murmur; she had been previously well, and had never had any other complaint except an occasional sick headache. For three days she had been suffering with sharp pains in the large joints, but without heat, swelling, or any rise of temperature. Her pulse was 70, of fair strength and volume, and the temperature was 99°. I ordered her 15 grains of sodium salicylate every four hours, and in three days she was able to leave her bed and be about, all pains and aches having disappeared. Her temperature had reached 100° at no time during her illness.

Two days after the patient had left her bed I was sent for. The patient complained of pain and a burning sensation of the alæ of the nose and of the right cheek. This, following a severe chill, had come on suddenly during the night On inspection there was a scarlet-red rash, slightly raised, with a well-defined border. The parts about the eruption were hot and œdematous. The pulse was 120, and feeble, the temperature being 102½°, which in the evening of the same day rose to 104⅘°. Upon the most careful examination I was unable to discover the slightest history of traumatism. I recognized

the disease as facial erysipelas, and adopted a plan of treatment introduced by Professor J. M. Da Costa—the administration of pilocarpine hypodermatically. In this instance, however, on account of the old valvular difficulty, I ordered pilocarpine, grain $\frac{1}{8}$, by the mouth, every four hours. The eruption was dusted with bismuth subnitrate.

The eruption spread rapidly, so that on the morning of the fourth day of the disease it involved the entire scalp and the face, with the exception of the chin. Both eyes were closed, and greatly swollen. The patient suffered great pain and smarting, complaining very much of occipital headache, insomnia and nervousness. There was complete anorexia. She complained of considerable pain in the lumbar region and in the loins. The temperature was very variable, ranging between 102½–105⅗°, and at one time during the disease it reached 106⅕°, the evening temperature being always higher than that of the morning. The pulse throughout was quick, feeble, occasionally intermitting, and ran from 120 to 150 per minute.

The urine was examined daily, the first three days being normal, and the urates becoming much more marked as the disease advanced. On the morning of the fourth day albumin appeared. There were no tube-casts. On the fifth day the existence of albumin became marked, and hyaline tube-casts were found. On the seventh day albumin was one-half by bulk in the test-tube. The patient was now passing four ounces of urine in twenty-four hours. She took very little nourishment, and was generally in a comatose condition, with low muttering delirium, from which she was raised only with the greatest difficulty. These symptoms increased during the night. Professor Da Costa now saw the case with me. On the eighth day the patient had four uræmic convulsions that began with twitchings of the muscles of the face, thence extending to all parts of the body. The convulsions were very violent. Following the convulsions there was the profoundest coma. The first of the uræmic seizures was by far the most severe, and lasted fully one hour. Some of the urine was drawn after the first convulsion; sp. gr. 1022, reaction acid, albumin one-half by bulk, no sugar; epithelial, granular and blood casts. The granular and epithelial casts were very numerous. The spleen was decidedly enlarged. Swelling of both feet now set in. The patient was put on the infusion of digitalis, ʒij every two hours.

On the eleventh day considerable improvement was noticed. She was now passing twelve ounces of urine, and the eruption began to fade. The temperature was 101½°. She was still in a semi-comatose state, but could be easily roused, after which she would again relapse. The albumin was diminishing, but tube-casts were still present. From this time the improvement was rapid. The eruption faded more each day, the urine increased in quantity, and the albumin diminished. On the twentieth day the patient passed a little over one quart of urine, albumin and tube-casts being still present. All traces of eruption were gone and the patient was able to leave her bed, although she was still very weak. Her temperature was normal.

Two days afterward the patient complained of pain in the throat and difficulty on deglutition. On inspection the throat was found to be red and swollen. The tonsils were enormously enlarged. She complained of headache and pain in the ears. The temperature was 102½°. The pulse was 100. The tonsillitis, for such the throat condition undoubtedly was, lasted six days. Pus formed in each tonsil, and after being evacuated the patient recovered, although a tender condition of the throat remained for some time afterward. All traces of the erysipelas were gone, the desquamation having been thorough. Considerable thickening of the skin had taken place. Albumin and epithelial casts still persisted in the urine, and are present to-day after a lapse of two and one-half years. The patient lost fourteen pounds during her illness.

The treatment consisted in giving pilocarpine gr. $\frac{1}{8}$ in pill every four hours. When the kidney symptoms became marked the pilocarpine was discontinued. Inf. digitalis ʒij every two hours was given, and dry cups were used over the kidney.

The tonsillitis was treated in the usual manner by guaiac, etc. In acute facial erysipelas I have seen pilocarpine hypodermatically do wonders. After setting up considerable sweating the eruption has disappeared in three days. But it can be given with safety only to the strong and robust.

My reasons for narrating this case at length are to call attention to some symptoms which are of great importance, and are usually overlooked. For instance, the kidney disorder is not mentioned in the majority of our text-books, and where it is mentioned but slight notice is taken of it, and it is quickly dismissed as a slight complication. Da Costa ("Internal Complications of Acute Erysipelas," *Amer. Journ. Med. Sci.*, Oct., 1877) was the first to call attention to the constancy of this symptom. It occurs in nearly every case of erysipelas, certainly in every well-marked case. It even occurs in traumatic erysipelas. It is not an early symptom. About the fifth or sixth day of the disease a trace of albumin will be found in the urine. This trace will remain for several days, and disappear as the case improves. If, however, the patient should get worse, and the disease spread, the albumin increases in quantity and tube-casts begin to make their appearance. I have observed this in five different cases. The amount of albumin in this way becomes a guide to prognosis. It always reappears in a relapse, although it is usually not so marked nor so constant as in the original attack.

The albumin may be explained in several ways. It may be due to the general derangement of the blood, such as we find in the low fevers and in some forms of rheumatism. But a more likely view is one that is borne out by the post-mortem appearances of the kidneys. After a death from erysipelas the kidneys are found engorged with blood, congested, and even in a state of parenchymatous inflammation—

in other words, a true acute or subacute nephritis. (Ponfick, *Deutsch. Klin.*, No. 20, 1868.) It would be very difficult to account for such a large amount of albumin and tube-casts except by the fact that a true inflammation of the kidney takes place, as in the case of scarlet fever, though generally of a much milder type. This calls to mind the analogy between inflammation of the skin and disease of the kidney. There is not a single true acute inflammation of the skin in which we do not find albumin in the urine. The intimate physiological connection between the skin and the kidney readily explains this. In scalds and burns we find albumin in the urine, just as in the same connection we find ulcers of the intestines (principally of the duodenum). To make the connection still closer we also have ulcers of the duodenum and of the other intestines in acute erysipelas. Larcher (*Arch. Gén.*, 1864) reports two cases; Malherbe (*Arch. Gén.*, 1865) reports one case.

The uræmic convulsions that occurred in this case can of course be explained by the condition of the kidney and the albumin circulating in the system. I have not been able to find another case of erysipelas in which uræmia occurred. It must be set down as a rare complication. Œdema of the legs occurs whenever the amount of albumin becomes excessive, and has frequently been observed. Friedreich (*Klin. Vorträge*, No. 75, 1874) states that swelling of the spleen is quite common in erysipelas. Heart murmurs occur, and throat complications are also often met with.

It seems, then, that in acute erysipelas the symptom of most importance after the eruption is the albuminuria. By observing whether the albumin is increasing or diminishing we know how our case is progressing, and that whenever the disease assumes a graver type it is necessary to pay most particular attention to the condition of the kidney.

ON THE RELIEF OF CHRONIC CATARRHAL DEAFNESS BY EXCISION OF THE MEMBRANA TYMPANI AND THE TWO LARGER OSSICULA.

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SINCE the treatment of chronic catarrh of the middle ear, with its attendant deafness, tinnitus aurium, and vertigo, forms about three-quarters of the aurist's work, and as the results are very often unsatisfactory, I am induced to publish the following case as illustrative of the benefits of a new treatment of this hitherto intractable aural malady. Let me premise this short account by the statement that I have been induced to perform the operation of excision of the membrana and the two larger ossicula in chronic catarrh of the middle ear, because I believe that what we have to contend with in these cases is ankylosis, in whole or in part, of the conductors of sound lying in the middle ear, incurable in any other way. The relief obtained in the case I am about to narrate can be explained in no other way than that the removal of the ankylosed membrana, malleus and incus permits the stapes to vibrate more freely in its oval window. If the stapes is also ankylosed, the relief of deafness is slight or is entirely wanting, though even in such a case the tinnitus and vertigo, as shown in a case already reported by me,[1] may be entirely and permanently relieved.

July 15, 1889, Mrs. X., twenty years of age, stated that eighteen months previously she had camped out in Syria. She found it very damp and cold at night and took a severe cold in her head. Since then she has had pulsating tinnitus and increasing hardness of hearing in her left ear, with fulness in the head and at times vertigo from the excessive tinnitus. Upon returning, her family observed that her voice sounded as if she had a cold in her head. During the past year she underwent treatment of the fauces at the hands of an oculist, who also inflated the ears by Politzer's method, but without benefit; in fact all the bad aural symptoms increased.

When first seen by the writer her condition was as follows: Left membrana tympani retracted and depressed, especially over the incus-stapes joint. Hearing in the left ear, four feet, for isolated words of ordinary conversational tone. There was a constant, pulsating tinnitus in the left ear, with some slight constant singing tinnitus in the right ear. The Eustachian tubes were pervious to inflations. The nares showed general, active, hypertrophic catarrh. The pharynx was in good condition.

Treatment.—Dobell's spray was used by patient once daily at home. In the course of a fortnight the nares looked better and the tinnitus in the right ear became much less. The tinnitus in the left ear, however, was no better. The catarrhal symptoms grew worse by September, 1889, and from this time until March, 1890, treatment consisted in the use of Dobell's spray by the patient at home, and in injections into the Eustachian tubes by means of the syringe-catheter, once or twice a week, by me. The hearing in the left ear, however, diminished to *six inches* for isolated words and the tinnitus was great and annoying. The hearing in the right ear remained very good and the tinnitus very slight.

By August, 1890, as the sprays to the nares and the injections into the Eustachian tubes did no good, and as the hypertrophies from vasomotor paresis remained undiminished and the nasal respiration was impeded, each lower turbinated mucous cushion was incised at three points, one behind the other, at six different times by means of the galvano-cautery. This permanently reduced the hypertrophies, restored the nasal respiration, the catarrhal

[1] The American Journal of the Medical Sciences, February, 1890.

symptoms in the naso-pharynx becoming better, but the ear-symptoms remained unimproved.

In March, 1891, the hearing in the left ear was only six inches for isolated words and the pulsating tinnitus very great, with sudden accessions, which induced great vertigo. It was therefore decided to perform excision of the membrana tympani and the two larger ossicula in the left ear.

On March 5, 1891, the patient was etherized, and under illumination of the ear by means of the electric head-lamp, an incision was made through the membrana tympani, comprising its upper posterior quadrant, and the incus exposed. I then passed a small oval blade, two mm. long, set at right angles to the shaft, behind the incus and severed the incus-stapes joint; I drew the incus a little downward with the blade of the knife, and seizing the incus with forceps lifted it from the tympanic cavity. Then I excised the rest of the membrana about the periphery and withdrew the malleus and the membrana from the auditory canal. I dressed the ear with a tampon of bichloride cotton placed about half-way down the canal. The next day there was no reaction, but the hearing was now *four feet* for isolated words. The tinnitus was not diminished. The ear had lost its stopped-up feeling and all sensation of pressure in it had gone.

On the third day after the operation, after exposure to cold wind, the ear began to bleed a little, and finally a glairy, transparent, mucus-like discharge set in, and continued for about six weeks, when the regeneration of the membrana tympani became complete. On April 29th the new imperforate membrana was plainly seen, somewhat congested. Hearing for isolated words was now *four feet*. The tinnitus was still considerable. On June 4th the new membrana was uncongested and bluish. Hearing for isolated words was *twelve feet*. Pulsating tinnitus and vertigo had ceased. There was some slight, constant tinnitus if the patient listened for it, but no sensation of fulness in her left ear. The patient says she can hear conversation of a companion sitting on the left side without turning around, as she had to do before the operation.

I would call attention first to the improved hearing (from six inches to four feet) immediately after the operation, and also to the disappearance of the sensation of pressure in the ear, so annoying before the operation. Doubtless, the latter sensation was due to the pressure from retraction of the membrana and ossicula.

Secondly, note the progressive improvement in hearing, notwithstanding regeneration of the membrana tympani. The stapes, being now unimpeded by the retraction of the membrana and ankylosed malleus and incus, vibrates under sonorous waves, notwithstanding the intervention of a new membrana.

Thirdly, and with emphasis, I would call attention to the entire relief from pulsating tinnitus and attacks of dizziness. The relief of the vertigo is due to the removal of the mechanical pressure exercised by the in-drawn malleus and incus upon the stapes. The latter consequently being freed from impaction in the oval window, no longer compromises the labyrinth-fluid and irritates the motor filaments of the auditory nerve. The tinnitus is diminished because the congestion in the middle ear, due to the irritation brought about by the above-named retraction and impaction in the oval window, is removed.

ORIGINAL LECTURES.

APPENDICITIS. CASTRATION FOR SARCOMA OF THE TESTIS. WIRING FOR COMMINUTED FRACTURE OF THE PATELLA.

Abstract of a Clinical Lecture delivered at the Roosevelt Hospital.

BY CHARLES McBURNEY, M.D.,
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Two cases of appendicitis were shown. The first patient was a man, twenty-eight years old, who began to have slight pain in the right iliac fossa two weeks previously. Although suffering pain, he continued to go about until presenting himself at the hospital. There was a good deal of pain and tenderness in the right iliac region, with some irritability of the bladder. There had been no vomiting; the pulse was 90 and the temperature 99° F. The bowels had moved regularly up to thirty-six hours previously. At the first examination pressure made with a single finger, at a point about two inches to the inside of the spine of the ilium, elicited marked tenderness. This point of tenderness is of much diagnostic value in distinguishing between disease of the vermiform appendix and inflammatory disease of other parts. There was slight tenderness toward the pubes and unusual resistance to palpation over the right iliac fossa. In such cases the diagnosis is often most difficult; but accepting its correctness, the question of the time to operate becomes important and deserving of thoughtful deliberation. Early operation is to be recommended; because, although such intra-peritoneal collections of pus may long remain quiescent, very slight traumatism or inconsiderable interference with the general health might cause a rapid development of inflammation with abundant formation of pus, followed occasionally by perforation into the peritoneal cavity. There is no possible way of knowing beforehand what might happen in these cases. The operation is dangerous, and, owing to firm intestinal adhesions, oftentimes difficult; but the danger of the operation is considerably less than the risk of leaving the case alone.

An incision along the edge of the rectus muscle extending from two inches above the anterior spine of the ilium down to within one-quarter of an inch of the deep epigastric artery, would pass through the external oblique aponeurosis, and the abdominal wall would be incised along this line, as the hemorrhage here would be slight. The cavity could then be opened and search made for the diseased organ; if it were not readily found the base of the appendix could be sought at its point of origin from the cæcum. If the appendix can be isolated, it should be ligated within one-eighth of an inch of the

intestine and then excised. The stump, before being returned, should be disinfected by the application of the actual cautery. As this stump is very minute, the plan of covering it with peritoneum is not readily accomplished, and offers no advantage on the ground of safety.

In the present case, on passing the finger into the peritoneal cavity, the appendix, much distended and surrounded by pus, was found to pass inward and behind the head of the colon, the surrounding tissues being generally adherent. The appendix was isolated by gently breaking up the adhesions with the finger, was ligated and excised, and the stump cauterized. A drainage-tube was inserted, and several sutures were passed through the entire thickness of the abdominal wall, so as to coaptate a portion of the wound, the remainder being packed with iodoform gauze. The intestines pressed against the gauze packing, but within twelve hours adhesions would probably be formed, shutting off the general peritoneal cavity from the wound. The dressing, which consisted of sublimate-gauze and cotton, should not be touched until the third day, unless there be pain or a rise of temperature; then the packing should be removed and renewed. Little or no irrigation would be required. The result in this case justified the emphasis which had been laid upon the importance of early exploratory incision; for, although this patient had been able to go about most of the time and had had a temperature of only 99° F., an abscess was found behind the intestines which was liable to rupture at any time.

The second case, although also one of appendicitis, differed materially from the first. The patient, a boy seventeen years old, began to have pain in the right inguinal region ten days previously, but did not go to bed until three days later, and had no medical attendance for two days more. With the exception of continuous pain in the right iliac fossa he had been fairly comfortable. He has had no vomiting and no abdominal distention; his temperature has ranged between 101° and 102° F. Examination disclosed, close to the iliac spine and along the outer half of Poupart's ligament, over an area of about two and a half inches wide, the existence of considerable tenderness, with slight resistance and percussion dulness; but fluctuation could not be detected. The characteristic point of tenderness, as described in the preceding case, was also present in this. A diagnosis of intra-peritoneal abscess from appendicitis was made. Inflammatory adhesions had probably formed between the surrounding intestines, so that when perforation took place the extravasated fluid had been shut off from the general peritoneal cavity. Formerly such cases were allowed to open spontaneously by a very slow process, or else rupture into the peritoneal cavity, giving rise to fatal suppurative peritonitis. It remained for Dr. Willard Parker to show that when such abscesses had reached a certain size they could, like any other abscess, be opened with safety any time after the seventh or tenth day; but until quite recently it was erroneously considered that these abscesses were situated outside of the peritoneum, the abscess having formed next to the appendix or the head of the colon, then working its way through into the cellular tissue between the peritoneum and the iliacus muscle, and in this way up to the groin. This occurs rarely; almost all such cases were originally intra-peritoneal; but a sac was formed for the abscess by adhesions between the viscera covered with peritoneum and the anterior and posterior abdominal walls.

Since, in this case, the abscess was already formed, there was no propriety in making an incision into the general peritoneal cavity. The incision was made close to Poupart's ligament so as to enter the abscess directly. At this late stage there was no use in looking for the diseased appendix. For two reasons exploratory puncture previous to the operation is not to be commended; first, because the puncture often fails to find fluid when present, and secondly, because the operator who depends upon this test and fails to find pus would hesitate to operate. The first puncture might injure an important viscus, and if on withdrawing the needle through the peritoneum pus were reached, infection might take place. After having made an incision there is not so much objection to an exploratory puncture in order more definitely to locate the pus; but even then, the procedure is not necessary. Close to the peritoneum œdematous tissue, suggestive of the presence of pus, was encountered. The abscess was found and evacuated; on introducing the finger into its cavity two small concretions, which had given rise to the trouble, were found and removed. The walls of the abscess had been formed by adhesions in the manner described, and the agglutinated convolutions of intestines could be felt. After irrigating the abscess cavity with boro-salicylic solution, a drainage-tube was inserted and the cavity packed with iodoform-gauze. If in this instance the incision adopted in the preceding case had been employed, it would have been necessary to evacuate the abscess through the general peritoneal cavity, thus greatly increasing the danger.

The next case presented was that of a boy about eighteen years old, who had a tumor of the right testis. About one year before, the testis was injured, immediately swelling to one-half its present size. The mass, which was very tender, was extremely heavy, very dense, semi-elastic, and extended up beyond the external abdominal ring. The spermatic cord was somewhat enlarged. While there was a possibility of the case being one of hæmatocele, it was more probably one of sarcoma. An incision was made over the anterior surface of the tumor and the parts rapidly dissected away. After extending the incision up to the internal ring, it was found that the growth extended still further and involved the peritoneum where it was reflected from the cord. The diseased organ was then removed and the orifice in the peritoneum closed. The remainder of the inguinal canal was then sutured with catgut, the skin with silk. Rubber drainage-tubes were inserted above and below, and a small portion at the upper part of the wound, which extended down to the peritoneum, was packed with iodoform-gauze. After its removal, the tumor was found to be a typical sarcoma. There will probably be a rapid recurrence of the growth, as it was impossible to extend the dissection higher without taking unwarranted risks.

A man, twenty-eight years old, was admitted to the hospital with a simple transverse fracture of the patella. In thirteen weeks, at the time of his discharge from the hospital, the dressings were removed and the fragments were found close together and firmly united. The patient was able to walk about with a fair degree of

motion. Several weeks later he fell, and although he experienced very severe pain in the affected knee, he walked around for two days before returning to the hospital. At the time of his second admission there was an enormous effusion into the joint with much discoloration, so that it was impossible to make out the exact nature of the injury until about ten days later, when it was found that he had refractured the lower fragment, while the original ligament remained intact, and was less than one-quarter of an inch long. In uncomplicated cases wiring the patella is objectionable, but in such a case as this—the patient being a laboring man—in which firmness of the joint was of special importance, the procedure became a most proper one.

An incision over the seat of the injury showed extensive extravasation of blood. The edges of the fragments required to be slightly freshened. After wiring, the wound was sutured with catgut and a small rubber drainage-tube inserted at each angle. A compress and bandage and a wooden posterior splint, with a footboard, completed the dressing.

CURRENT LITERATURE.

ACCIDENTS RESULTING FROM INTRA-UTERINE CAUTERIZATION WITH CANQUOIN'S PASTE.

PICHEVIN (*Nouvelles Archives d' Obstét. et de Gynécol.*, No. 2, 1891) concludes that the time has come to refute the arguments which have been advanced to legitimize the employment of a therapeutic measure which theory condemns in advance. He feels that it is necessary to furnish some facts, the eloquence of which is such that men of good faith and physicians desirous of the interest of their patients may renounce positively a proceeding which, as someone has written, is "a manifestation of atavism." Many who have employed caustics in the uterine cavity at some time in their practice are strongly opposed to this method of treatment to-day. Avan spoke of cauterizations of the cervix with the paste of the chloride of zinc, but was far from recommending this treatment. Bennet makes mention of the retractions which he had observed in women whose cervical canal had been cauterized. Scanzoni was strongly opposed to the employment of the caustic of Filhos, and Nonat reports great constriction of the utero-vaginal orifice following the use of Vienna paste. Bernutz and Goupil, after treating a young woman suffering from metritis by Vienna paste, reported an occlusion of the neck with menstrual retention. Emmet, Schröder, Martin, Mundé and others, all record themselves as opposed to cervical and intra-uterine cauterizations.

The advocates of the treatment by cauterization are strong in their opposition to the method of treatment by curetting the uterus. They claim that the latter is an operation which necessitates prolonged and rigid antiseptic precautions; that it places the surgeon under the necessity of making a previous dilatation; that it demands a chloroformization, which is "always formidable;" that it gives rise to a loss of blood which is at times very great; that it is a rather grave and complex operation; that it compels the surgeon to practise forcible depression of the uterus; that it is not successful when the uterus is retro-displaced; that it does not give better results than the other procedures which have been advanced for the cure of endometritis; and, finally, that it causes atresia. In answer to these propositions, Pichevin declares that *curage* of the uterus has been adopted by the immense majority of surgeons. Antisepsis, he says, is beyond doubt indispensable before, during and after the operation; slight dilatation is useful, but not indispensable. As for chloroformization, it may be omitted; but for the sake of the patient it has become the custom to resort to anæsthetization. The quantity of blood which escapes during and after the operation is absolutely insignificant. Moreover, hemorrhage—when it exists before the intervention—is arrested as by enchantment in the very great majority of cases. The abrasion of the uterine mucosa with a dull or cutting curette is not a complex operation. There is nothing more simple. Forcible depression of the uterus is not necessary. It suffices to fix the cervix with the aid of a small forceps. When the uterus is retro-displaced, the metritis will be cured under the influence of the curette, but it is necessary to replace the organ in its normal position. The abrasion of the uterine mucosa is not an infallible method of treatment for endometritis, but no procedure can be compared to it. As to subsequent atresia, Pichevin has never observed it in his practice.

On the other hand, the apostles of intra-uterine cauterization claim the following advantages for Canquoin's paste in the treatment of endometritis:

1. It is unnecessary to perform minute and prolonged antisepsis.

2. It is unnecessary to practise a previous dilatation.

3. It is unnecessary to anæsthetize the patient. The introduction of the stick of Canquoin does not occasion any pain. As to consecutive pains, they are rare, ordinarily but slightly marked, and of short duration.

4. The treatment does not necessitate a long rest. The patient is cured at the end of some days.

5. There is no hemorrhage produced by the cauterization.

6. Atresia does not result, or if it is noticed it is an exceptional occurrence. In any case, the cervical constriction is not special to this mode of treatment.

7. The intra-uterine cauterization is efficacious. The cure obtained from the stick or pencil is real and durable.

8. The innocuous nature of this intervention is undeniable.

9. The introduction of the stick or pencil of chloride of zinc into the uterus is simple and easy.

To these propositions Pichevin offers the following refutations: While Polaillon strongly advocates the employment of intra-uterine caustics, he admits that antiseptic injections are indispensable while the scar is forming and eliminating itself, and during all

the time necessary for the cure. Dumontpallier likewise says that the day of the operation being determined, frequent vaginal injections, about three *per diem*, should be made before the operation, employing a solution of sublimate 1 to 2000 or 1 to 3000.

Grandmaison and Bock recommend antiseptic washes for the external genitalia, with vaginal and intra-uterine injections of sublimate while the eschar is being cast off. Bock injects into the uterus tincture of iodine, perchloride of iron, or silver nitrate. It will thus be seen that the advocates of this method themselves largely employ antisepsis. As to the previous dilatation, Polaillon recognizes the fact that in certain cases it is necessary to introduce a laminaria tent, or to perform a slight dilatation with a uterine dilator. Grandmaison and Bock have also been compelled to dilate. Several of the followers of this method of treatment have testified to the severe pain which has been produced by the caustic agent. Reynier noticed that injections of morphine failed to relieve these sufferings. In ten operations Dr. Jacob has, with but one exception, noted very severe pains attendant upon cauterization. As far as rapidity of cure is concerned, the statements that the patients who have undergone cauterization are discharged in a few days cured are gravely erroneous. Bock, the Belgian defender of the system, says: "The time necessary for a cure will be from three weeks to three months." Jacobs, Polaillon and Batuaud report cases of violent hemorrhage following the separation of the eschar, thus confuting the claim of the adherents of cauterization as to the entire absence of bleeding. The efficacy of cauterization has not been demonstrated by the reports which have been published. In fifteen operations Deletrez reports but three cures, while Jacobs had ten relapses in ten cases. Neither is the method of treatment entirely free from unfortunate complications. In one hundred observations Dumontpallier reports four peri-uterine complications (two cases of pelvic peritonitis and two abscesses of the broad ligament). Following the application of caustics to the uterus, the state of the menstruation has been in several instances altered. Dysmenorrhœa and irregular menstruation, with increase of flow, have been noted by different operators.

CASE OF BILATERAL PNEUMOTHORAX.

OTTO LASIUS reports the case of a woman, twenty-seven years of age, with healthy husband, parents, brothers, and sisters. For a year and a half her capacity for work had diminished; she was no longer able to walk as rapidly and continuously as formerly, soon became tired, and was short of breath on slight exertion. Cough was at first slight, without expectoration, but subsequently became obstinate and accompanied by expectoration. In August, 1887, consolidation of the right apex, with beginning softening, was detected. The disease steadily progressed and a cavity developed. On January 10, 1888, the condition became suddenly worse; intense dyspnœa with a sense of constriction of the chest developed. Over the right anterior portion of the thorax, from the clavicle downward, a loud metallic percussion-note was present, which below became clearer. Over this area were heard loud metallic breathing with metallic tinkling. The same condition existed behind and above, while below there was pulmonary resonance and vesicular breathing. Nothing abnormal was detected in the left lung. On January 11th, the patient had a miscarriage of a fœtus, of six or seven months, which died in four hours. No tuberculosis was discovered at the autopsy. The patient was delirious during the following night. On January 13th, cyanosis became grave; orthopnœa set in; the respirations became 50; the pulse 120. January 14th, on the left side was developed a loud, metallic, tympanitic percussion-note, with complete absence of vesicular breathing; but anteriorly, on the side, and posteriorly, a higher-pitched sound was perceptible. In the second intercostal space, on the right side, a peculiar sensation was communicated to the finger; it was as though, directly under the skin, a viscid fluid mixed with air escaped, with a splashing sound, from a small opening. Death took place on January 20. At the autopsy bilateral pneumothorax was demonstrated.

The peculiar symptom noticed in the second intercostal space on the right side was due to the fact that the anterior surface of the right lung was adherent to the wall of the thorax in such a way that between it and the mediastinal pleura there was a cavity one inch long and four inches deep, which extended from the second to the fifth rib, and contained almost an ounce of fluid.—*Deutsche med. Wochenschrift*, April 9, 1891.

IT is said that a Russian physician has brought a libel suit against a widower who had pasted on the tombstone of his lately deceased wife the last prescription he had given her, the day before her death.

"OF all that has been written and said as to what constitutes a gentleman, I like best that which we owe to Cardinal Newman, who says 'it is almost a definition of a gentleman to say he is one who never inflicts pain.' It matters not whether he be rich or poor, lettered or unlettered, well dressed or illy clad, he possesses most of that which goes to make up a gentleman who will not inflict pain."—TYSON, *Valedictory Address*, 1891.

"MUCH thought was expended nearly half a century ago by some of the ablest minds in the profession you have this day entered, in constructing a set of rules which should govern us in our relations to our patients, and especially to each other. The result was the Code of Ethics of the American Medical Association, a modern classic in literature which embodies the highest principles of conduct of men toward men. You will do well to study it closely, and to make it your guide; but you will learn from such study that the code of ethics is but an expansion of a much older and briefer code, 'Do unto others as you would that they should do unto you.' Than this there can be no safer guide, and if followed it will avoid most, if not all the misunderstandings which arise among medical men."—TYSON, *Valedictory Address*, 1891.

THE MEDICAL NEWS.

A WEEKLY JOURNAL

OF MEDICAL SCIENCE.

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SATURDAY, JULY 4, 1891.

INFECTIOUS BRIGHT'S DISEASE.

CLINICIANS have long felt that our knowledge of the etiology of acute Bright's disease is too scanty, and that a thorough review and re-investigation are necessary to bring the matter to a proper clearness. With the rapid advance in accurate methods of minute investigation it was but natural to expect a fuller knowledge of the causation of nephritis in its several forms, and in view of the late researches into the etiological factors of these diseases perhaps the time is now ripe for the expression of certain definite opinions or conclusions. The old idea—ascribing every case of acute Bright's disease to one of several causes, as, *e. g.*, to exposure, to preceding acute infectious disease, or to toxic agency—has been found too general and unsatisfactory.

So long as thirty years ago suspicion began to awaken, and BAMBERGER called attention to cases of idiopathic acute nephritis which suggested to him an infectious origin. Twenty years later LITTEN'S attention was directed to the same point, and, with his better facilities, he was able to demonstrate bacterial foci in the kidneys, surrounded by patches of circumscribed inflammation, the vessels of the kidney being filled with microörganisms and the urine swarming with them. These are not to be considered as isolated instances of what Litten would call kidney-mycosis; the physician is constantly brought face to face with cases of this kind, cases which are not preceded by infectious disease, nor due to intoxication of any kind, and which arise independently of exposure. There are often violent and typical cases of acute nephritis, and these are they that, from the etiological point of view, puzzle us most. Here it is that investigation is needed.

As regards the nephritis following infectious disease it seems sufficiently proved by the investigations of Weigert, Gaffky, Cornil, Babes, Oertel and others, as well as by clinical observation, that the microörganisms, or the products of their activity, play an important *rôle* in the production of acute Bright's disease after pneumonia, erysipelas, typhoid, scarlet and several other infectious fevers. But it is to the other class of cases—those independent of infectious fevers—that we wish to direct attention. In this connection the careful studies of MANNABERG, at Nothnagel's clinic (*Zeitsch. f. klin. Med.*, xviii. 3 and 4), are of great interest. Whether or not we wish to go so far as he does, and ascribe to a particular streptococcus a definite etiological agency, it must be admitted that the bacteriological studies so closely coincide with well-observed clinical facts that great weight must be given to the theory of the existence of a form of mycotic nephritis. According to Mannaberg, his streptococcus possesses peculiar culture-properties, is constant in the urine and kidneys of certain cases clinically similar, disappears from the urine at the subsidence of the disease, and, when injected in pure culture into rabbits or dogs, gives rise to violent nephritis with occasional endocarditis—in other words, a blood-poisoning, with special involvement of the kidneys. These investigations are of interest in pointing out a way of study of the greatest promise. They must, of course, be repeated and confirmed by others before we can place complete confidence in them. As year by year our knowledge widens and the science of pathology is better developed, the long array of so-called functional diseases is lessened. At the same time we may expect such general agencies as cold to play a less prominent part in our conceptions of etiology. When of 105 cases of "idiopathic" acute Bright's disease, 64 present no history of cold or exposure, is it not necessary to assume other causal factors than those to which we have been accustomed? And what is more probable than infection? There are in these cases rapid onset, moderate fever, constitutional disturbances, kidneys and

urine full of bacteria—in short, a picture of disease in the highest degree suggestive of microörganismal infection. Added to the teaching of the study of individual cases and of bacteriological research, there is also the lesson of distinct epidemicity, as first observed by MIRCOLI and later by others. We therefore have the strongest ground for the theory that a definite form of infectious Bright's disease may yet be classed in our nosology.

RESUSCITATION BY OXYGEN.

LIEUT.-COL. HENRY ELSDALE'S experience with oxygen as a resuscitating agent, related in the May number of the *Nineteenth Century*, is evidently considered by him (and by the editor of the magazine), as something wholly new. While far from being a novel application of oxygen, the case appears to be unique in the extraordinary pressure employed. A man who had been attempting to empty the coal-gas from a balloon was found lying insensible, "having been breathing an atmosphere of coal gas for an unknown time." "No action of the heart could be felt," there was "no perceptible breathing," and to all appearances the man was dead. Pure oxygen being at hand, under a pressure of 1000 lbs. to the square inch, a tube connected with the reservoir was inserted into the man's mouth, and the gas turned on "as delicately as possible." Immediately the body began to exhibit writhings and convulsions, and in about ten minutes the man arose, well.

That wonderful physician who, a century ago, honored the chair of chemistry at Oxford, THOMAS BEDDOES, the worthy friend and co-laborer of Joseph Priestley, Erasmus Darwin, James Watt and Humphry Davy, demonstrated, among other things too little remembered by the profession, that kittens and rabbits that had inhaled oxygen for a certain time were more resistant to drowning, freezing or suffocating with irrespirable gases, than similar animals not saturated with oxygen.

Since the time of Beddoes, numerous observations proving the usefulness of oxygen in resuscitating the drowned or those poisoned with narcotic drugs or asphyxiating gases have accumulated. In J. SOLIS-COHEN'S treatise *On Inhalation*, we read that previously to 1847 it had been proposed by JACKSON and RICHARDSON that "wherever ether was administered oxygen should be kept in readiness to be inhaled in case of the occurrence of formidable symptoms, and that MR. HOOPER, acting on the suggestion, has supplied his inhaler with the means of furnishing oxygen at pleasure." DUCROY "proposed to make every patient awakening from chloroform-narcosis inhale oxygen, in order to rid him of headache and other inconveniences following the administration of that anæsthetic," and a very remarkable instance of recovery from chloroform-narcosis by the use of oxygen, which occurred at the New York Medical College, was published by ABRAHAMS in 1853.

Notwithstanding all this, and despite the fact that modern commercial enterprise has made it perfectly feasible always and everywhere to have the agent at command, there are many hospitals in which oxygen is not ready for instant use in emergencies, and it has not yet been recognized as an indispensable part of the outfit of life-saving stations. We believe that, not only in every clinic or private house where ether or chloroform is to be given should oxygen be under pressure, be instantly available, but that in hotels where persons are liable to be poisoned with coal-gas, and even in police-stations where persons poisoned by opium are likely to be taken, it should always be possible to find a reservoir of the gas. At seaside resorts, too, it should be part of the rescuing paraphernalia kept at the beach. A single life saved, and there would be many, would more than compensate for the cost. The pressure appears to have been a factor in Elsdale's case, and in any case the administration of oxygen should be accompanied with slow and regular movements of artificial respiration. B. W. RICHARDSON has shown that in artificial respiration the emptying of the lungs is ordinarily as important as the filling of them; and in his simple device of a double hand-bellows for that purpose, artificial expiration by suction plays an equal part with artificial inspiration by pressure.

THE ETIOLOGY OF CROUPOUS PNEUMONIA.

MODERN medical research has devoted considerable attention to the study of the etiology of disease. In the department of bacteriology discovery upon discovery, indicative of the causal relation between microörganisms and disease, has been made and verified. In the enthusiasm and excessive zeal which attend the promulgation of a new and promising doctrine, the indifferent student is apt to ignore important accessory conditions in a desire to reach a preconceived ideal.

At this day no unprejudiced mind will attempt to

controvert the validity of the germ-theory of disease; but we have not done in accepting the principle which the theory implies. Something more than a germ is requisite for the production of disease—not that the germ is a mere concomitant, but that, while perhaps the most important, it is but one of a number of elements, the association of which is the essential factor in the determination of a definite result; the soil must be fertile and the conditions propitious for growth and development. How else explain the immunity of some and the infection of others exposed to like influences under conditions apparently similar? Though we may never be able to explain the mode of action, it is well to recognize this association of etiological elements; while not detracting from the importance of the part played by microörganisms in the production of disease, we must not ignore or underrate the significance of other factors.

In a study of one hundred cases of uncomplicated croupous pneumonia, BRUNNER (*Deutsch. Archiv für klin Medicin*, Hefte 1 and 2, 1891) was able to determine that the disease is more common in males than in females; that most cases occur in the third and fourth decades of life; that those who lead active lives in the open air are predisposed; that the right lung is more commonly involved than the left; that the onset usually takes place in the morning with a chill; and that the disease is most prevalent in winter and in spring. Careful comparative observations upon the mean temperature, the mean humidity of the atmosphere, relative and absolute, the mean barometric pressure, as well as upon other meteorological conditions, in conjunction with the number of cases of pneumonia observed at different periods, revealed the fact that most cases occurred when the temperature was low, the absolute humidity slight, the relative humidity great, and the barometric pressure very high or very low. It appeared that those meteorological conditions that increased the physiological activity of the lungs favored the development of pneumonia.

The brief period of incubation which characterizes pneumonia may be explained by the almost constant presence of pneumonia-cocci in the air-passages, suitable extrinsic and intrinsic conditions conferring virulent properties upon a hitherto innocuous agent.

From many considerations it therefore appears that merely waging warfare against bacteria will not eradicate disease. The physical difficulties to be overcome alone render such a mode of treatment impracticable. A rational prophylaxis will have for its object the avoidance, as far as possible, of exposure to infection to deleterious influences of all kinds.

THE FRENCH BIRTH-RATE AND DEPOPULATION.

The Diagnosis.—The French census of 1886, the last that has been taken, showed an increase of 564,955, or 0.3 per cent., on the returns of 1881. In Germany the rate of annual increase is 0.7 per cent.; in Belgium, 0.9; in Spain and Italy, 0.6. Moreover, in France the birth-rate is diminishing, so that it will not be long before the death-rate will exceed the birth-rate. In 1856 the childless families constituted 17.3 per cent. of all families; in 1886, 20 per cent. The unmarried adults in 1856 composed 10.4; in 1886, 14.4 per cent. Patriotic Frenchmen—statesmen and philosophers—know what these figures mean, just as a physician knows the meaning of decreasing nutritional power in his patient.

The Treatment.—The forms of treatment proposed are many; all depend upon the special etiology ascribed to the disease by the friends of the patient. Sexual immorality is by some thought to lie at the bottom of the mischief; by others the blame is laid upon the law of inheritance; by still others, to the use of tobacco, etc. MONOD, Director of the Public Health, says that proper and feasible sanitation would certainly save 130,000 lives annually. BROUARDEL holds the State responsible for 14,000 lives annually sacrificed because vaccination has not been made compulsory. All, however, are agreed that the State shall be called in as physician-in-charge. Taxation of bachelors, rewards to fathers of large families, and many like proposals do not seem to reach the root of the matter. With a sublime indifference to the ethical aspect of the question — nay, even with most noteworthy encouragement of sexual immorality, the French Academy has offered its services as consultant, and at its last meeting unanimously, *and with applause*, passed the following resolution:

"That in each department there shall be established at least one asylum for the care of pregnant women during the last months of gestation; that if she wishes it each woman shall be so cared for that absolute secrecy shall be preserved as regards her entrance, stay and delivery in the establishment and as to her departure from it; that all adminis-

trative inquiry as to the place of residence and identity of the patient shall be interdicted; and, finally, that financial aid shall be given to such women as from insufficient means are unable to bring up their children."

In encouraging illegitimacy, the Academy evidently accepts the Jesuit maxim that the end justifies the means, and is also of the opinion that quantity is of far more value than quality. To an outsider it all appears more like stimulation than nutrition, and we hesitate about giving a definite prognosis.

SOCIETY PROCEEDINGS.

NEW YORK NEUROLOGICAL SOCIETY.

Meeting of June 3, 1891.

THE PRESIDENT, DR. L. C. GRAY, IN THE CHAIR.

DR. M. A. STARR read a paper on "The Cerebral Atrophies of Childhood, with Special Reference to Surgical Treatment." He devoted himself to a particular class of cases—viz., the cerebral diseases of infancy and childhood. Certain cerebral diseases of infancy give rise to definite symptoms, constituting three types of clinical cases: 1. Cases of hemiplegia, with or without athetosis; 2. Cases of mental defects of various grades; 3. Cases of sensory defects of various kinds. Since epileptiform seizures, *petit mal* or *grand mal*, are frequently encountered in any of these forms, and might be the symptom in regard to which advice was sought, the discussion must also include the surgical treatment of non-traumatic organic epilepsy in children. In cases of the first class the symptoms are unilateral paralysis, suddenly developed, after a series of convulsions, attended with elevation of temperature and other febrile symptoms, followed by loss of consciousness of varying duration; after the subsidence of the active symptoms of onset gradual improvement in the paralysis follows. Ultimately a stationary condition is reached, in which voluntary and automatic movements of the face are scarcely affected; speech, if lost, is usually regained; the arm is quite seriously paralyzed, the fingers being stiff and awkward, and sometimes in constant, slow, involuntary motion; the leg is held rather rigidly, so that the child limps in walking, and sometimes has club-foot. In all cases the paralyzed limbs are found to be affected in growth and development, being smaller, colder, stiffer and weaker than their fellows; the reflexes are exaggerated, but the electrical reactions are not quantitatively changed; sensation is normal. This condition remains through life as a permanent defect. In over one-half of the cases of this kind epileptic attacks are of frequent occurrence. The cases which date from birth must be divided into those in which there was evidence of traumatism during labor, and those in which there was nothing about the delivery sufficiently unnatural to awaken suspicion of trauma. In the former, cerebral hemorrhage (usually meningeal) is the cause of the symptoms. In the latter it is probable that an intrauterine encephalitis or some unknown cause has prevented the development of the fœtal brain. The degree of spontaneous recovery in any case could be pretty well determined by an examination at the end of the second year; complete recovery has never occurred. In organic epilepsy the fits are more likely to be frequent and severe than in idiopathic epilepsy. These attacks do not destroy life, but of course render it a burden, so that almost any means of relief is welcomed. Cases of the second class present mental defects rather than physical symptoms—defects which cannot be eradicated. Cases of the third class present no motor or mental deficiencies; they are capable of training, but display defects of sensory perception, indicative of gross cerebral disease. Many cases of deaf-mutism belong to this class, as do some cases of hemianopsia. Dr. Starr related the history of a little girl, twelve years old, who had suffered all her life from frequent attacks of *petit mal* and occasional attacks of *grand mal*. She had never been able to see objects approaching her from the left side. From the mother it was learned that the child had been delivered with much difficulty; that the labor had been protracted; that the head was misshapen and had a large caput succedaneum posteriorly. Perceptible flattening of the skull over the right occipital region could be detected. The visual fields were contracted. It is reasonable to suppose that there existed defective development of the right occipital lobe of the brain, involving the cortex and the subcortical tract. Wilbran has shown that a purely cortical lesion produces symmetrical defects in the visual field, while subcortical lesions produce asymmetrical defects. In the case reported the pupils responded to light thrown upon the blind field of the retina—hence the lesion was not in the optic tract. There was no hemianæsthesia or hemiplegia—consequently the lesion was not in the thalamus or near the internal capsule. The patient was brought for treatment for epilepsy, and it was important to decide as to the possible benefit of surgical interference. A solution of the problem of operative treatment must be based upon two considerations: (1) The pathology of the cases, and (2) upon the results of experience in cases in which such operations had been done. Differences in clinical types depended upon differences in situation of the lesion. The various processes of disease had as a fairly uniform result a condition of atrophy with sclerosis of the brain. In cases of the first type the sclerotic atrophy involved the motor area, the central convolutions and their immediate vicinity, including the tract arising from them, and usually the basal ganglia as well. In cases of the second type the sclerotic atrophy involved the anterior portion of the brain, and sometimes the entire hemisphere, to a greater or less extent. In cases of the third type the sclerotic atrophy involved the posterior and lateral parts of the hemispheres. The hypothesis that the lesion depended upon interference with the blood-supply of the part (since in some cases the atrophy is limited to the region supplied with blood by one arterial trunk) is weakened by the fact that at autopsies it is rare to find vascular lesions in the brains of infants. The pathogenesis of these defects is as yet quite obscure. From the records of operations performed in six cases of the first clinical type, it is evident that this method of treatment offered no relief. In the second type the pathology contra-

indicated operation. As to the third type, with sensory defects, there were no facts of surgical import to present; but, judging from the pathological resemblance between it and the first two classes, there was no reason to expect any different result from surgical treatment. The conclusions to be drawn are: 1. That in infancy and childhood mental defects, hemiplegia and sensory defects of years' duration are usually due to irremediable atrophy of the brain; 2. That in such cases surgical treatment cannot afford any relief, for there is probably no increase of intra-cranial pressure to be relieved, while the pathological state is one which is not susceptible of treatment; 3. That the sudden onset of motor, sensory or psychic symptoms in childhood, while awakening a suspicion of cerebral hæmorrhage, is not a positive indication, and cannot be made the basis for an operation, unless many other facts make the diagnosis clear; 4. That the occurrence of epilepsy in such cases might be made the basis of an operation, for while the epileptic attacks are of organic origin and will persist, their frequency may be much diminished. In such cases the opening in the skull should not be filled with bone. The existence of a movable connective-tissue valve of scalp covering the opening in the skull with varying tension, may have something to do with the cessation of the fits. Great caution is to observed in recommending surgical interference in the class of cases which belongs to cerebral atrophies.

DR. B. SACHS thought that there was hope for the cases described if they could be operated upon at the time of the initial lesion, before degenerative changes had taken place. It is worse than useless to operate in cases of sclerosis or porencephalus. Secondary degeneration follows in many diseases of the brain, but not in all cases. Much good is accomplished by the puncture of old hemorrhagic cysts. The frequency of epileptic attacks has been very much diminished by this procedure. In the radical treatment of cerebral atrophies, no good can result unless the entire diseased area is removed. The patient might be left with a paralysis, but with a cure of the epilepsy. Which of the two were the greater evil would have to be determined by those most interested. When a sclerotic condition was not thought to exist, and it was supposed that the initial lesion could be attacked, an operation might be done; but it must be borne in mind that children do not bear surgical operations upon the brain as well as do adults.

CORRESPONDENCE.

PATENT MEDICINES; QUACKERY; INCOMPETENCE AND FRAUD IN THE DRUG TRADE.

To the Editor of THE MEDICAL NEWS,

SIR: From the above heading you will instinctively think of the wordy denunciation, and the language of impotent abuse, so frequently hurled at quacks and quackery. You will also doubtless call to mind the addresses and resolutions of medical society anniversaries, in which the quack, metaphorically speaking, is cornered, and so to speak, punched in the ribs, and otherwise maimed and maltreated. But this so-called "doing-up" of the quack has not injured him very seriously. On the contrary, it has served to increase his strength and to prolong his days upon the earth. The object of all such efforts has looked in the right direction, and it is not my purpose to criticise it. But these agencies have had no very decided effect, and in the nature of the case they are not likely to influence or mould public opinion to any great extent.

In recent years attention has been turned to law-making, hoping thereby to restrict and control medical and pharmaceutical education and practice in such a way that the evils complained of may be finally abolished. This plan looks to a thorough purging of the body professional by means of legislative enactments, the application of which the executive departments, or more specifically the Governors of the respective States, are to be entrusted with. This method has some advantages. It is a very simple and summary manner of obtaining some sort of remedy for the evil. The average legislator and Governor are fond of making laws and increasing their political prerogatives, and will help our medical reformers along this line of action. These gentlemen, however, either forget or ignore the fact that the American medical profession many years ago tried this plan of dealing with the evils of quackery and incompetence in our ranks, and failed. And they forget that under a republican form of government all legislation directed against any popular error or crime whatever, will in the end be only so much *brutum fulmen* unless sustained by public opinion, and that popular evils will be corrected and popular crimes punished, law or no law, if public opinion decrees it. Whatever legislation, then, may be secured in the future, it will wholly and ingloriously fail in its avowed purpose, unless public opinion thoroughly indorses it.

The plan which I wish to propose looks to taking the people thoroughly into our confidence and making them our allies. In a word, it is as follows: After careful chemical analysis, the publication to the world of the secrets of the composition of all popular patent medicines, and also the testing of all drugs and pharmaceutical preparations suspected of not being up to the official standard of strength and purity.

A necessary part and prerequisite of this scheme is the establishment of a suitable but not very expensively equipped chemical laboratory centrally located, supported by and under the joint management of the American Medical and the American Pharmaceutical Associations, with publication of its work. The mystery of the composition of a patent medicine is the chief reason of its great sale, and the United States patent laws guarantee that the secret shall be kept. But if the Government could be induced to repeal these laws and require the composition of every nostrum to be published on the label or wrapper of the package or bottle in which it was dispensed, the ruin of the trade would follow. If, however, the two above-mentioned associations could, by combining their resources of money and skill, discover and divulge to the world these secrets, it would not be long before public opinion would demand some action on the part of Congress restricting and regulating the evils of the patent medicine trade. Nor would the resulting benefit of such a supervising control and influence over the regular drug trade be barren

in results. In time it would bring about the assurance that drugs and pharmaceutical preparations should be of a uniform standard of purity and strength.

Anyone, physician or druggist, could then submit drugs or preparations to the examination of this competent and fair tribunal, and errors or frauds would there be corrected, discovered and exposed. And particularly would the country physician, remote from the great manufacturing and importing centres of the country, hail with delight the institution of a single censorship, which would at once insure him the certainty of pure drugs and result in a greatly needed improvement in the drug trade.

GEO. COWAN.

DANVILLE, KY., June 18, 1891.

REVIEWS.

A TEXT-BOOK OF PRACTICAL THERAPEUTICS, WITH ESPECIAL REFERENCE TO THE APPLICATION OF REMEDIAL MEASURES TO DISEASE AND THEIR EMPLOYMENT UPON A RATIONAL BASIS. By HOBART AMORY HARE, M.D., B.Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to St. Agnes's Hospital and to the Medical Dispensary of the Children's Hospital; Laureate of the Royal Academy of Medicine in Belgium, of the Medical Society of London, etc.; Secretary of the Convention for the Revision of the Pharmacopœia of 1890. Second edition, enlarged and thoroughly revised. Philadelphia: Lea Brothers & Co., 1891.

IF the sale of a large edition of a work on practical therapeutics, and its adoption as a text-book by a number of medical colleges, within the short space of six months is any indication of its merits and of its value as a practical guide in the treatment of disease, Prof. Hare is to be congratulated upon having given the profession such a work. The appearance of new works and successive editions of old ones is necessitated by the rapid advance in our knowledge of the physiological action of drugs and their application for the cure of disease. Chemists are continually producing new compounds whose physiological actions are immediately investigated; clinicians eagerly scan the conclusions and seek out the indications for their use. While the results of individual observers are recorded in the periodical medical literature of the day, it becomes necessary at intervals for someone skilled in a knowledge of physiological methods, and possessing at the same time a general therapeutic training, to gather the results of different investigators, to determine their comparative value and present them in a compact form, that they may be readily accessible. The well-known investigations upon the physiological action of drugs, and the clinical experience of Prof. Hare, abundantly qualify him for such a task.

The present work is divided into four parts, viz.: I. General Therapeutic Considerations. II. Drugs. III. Remedial Measures other than drugs. Foods for the Sick. IV. Diseases. Tables of doses and remedies. Tables of relative weights and measures in the metric and apothecaries' systems. Index of drugs and remedial measures. Index of diseases and remedies.

In Part I. the author briefly and concisely discusses, among other topics, the modes of administering drugs, their dosage, the idiosyncrasies of patients, the incompatibilities of drugs, the indications and contra-indications for their use, etc. He interjects a large number of valuable and practical suggestions which must ever be kept in mind if the student or practitioner expects to obtain the best possible effects after their administration. It is a neglect of these primary facts which is the cause of so much disappointment, and which leads the practitioner to doubt the efficacy of remedies.

Part II., embracing nearly three hundred pages, is taken up with a consideration of the properties of drugs, their physiological action and therapeutical uses.

The author makes no attempt at a classification of drugs, but arranges them in alphabetical order, according to their English names. While it is well known that in the present state of pharmacology an exact and scientific classification is almost impossible, nevertheless a grouping together of those drugs which resemble each other in their effects on the system, both in health and disease, is not only possible but desirable. It would simplify the study of this subject and thus lighten the task of the student.

In the published reports of the physiological action of drugs by special investigators there is often much that may be of interest scientifically, but practically is of little value. Dr. Hare, who has had a large experience in investigating the action of drugs, has exercised good judgment in selecting and recording here only those effects upon the different physiological mechanisms which are essential to the therapeutist wishing to administer remedies intelligently. In this respect the work before us is worthy of commendation, because a thorough acquaintance with these facts, and the administration of drugs in accordance with them, is the only way in which a rational system of therapeutics can be established.

In Part III., in addition to a consideration of the therapeutic uses of heat, cold, antisepsis, disinfection, venesection, counter-irritation, etc., the author has added to the second edition a short account of the methods of employing the rest-cure—devised by Dr. S. Weir Mitchell, and which has been so successful in the treatment of a great variety of nervous diseases. The treatment by the method of suspension also receives a brief consideration. To those familiar with the difficulties of alimentation in various forms of disease, the introduction in this work of formulæ for the peptonization of milk, beef, gruel, and the diet lists of the Children's and University hospitals, will be considered judicious, and, if faithfully carried out, will not only enable the physician to combat successfully many pathological conditions of the alimentary canal, but also to retard the progress of many general wasting diseases.

In Part IV. the author has devoted nearly two hundred and fifty pages to the treatment of a large number of the more familiar diseases, and brought together under each disease the various drugs and remedial measures which in his experience and in the experience of others have been found most successful. Symptoms and pathology in these sections have been omitted, except in so far as they might be necessary to a correct application of the drugs. Numerous prescriptions will be found in this part, which, if carefully considered, will

at least teach young practitioners the value of combining two or more drugs for the purpose of obtaining the best possible results.

In the preparation of the first edition of this work errors of statement and fact unavoidably crept in, some of which were pointed out in the various published reviews. These, so far as possible, have been eliminated and the entire text has been subjected to careful revision. Upon any subject about which there is so much diversity of opinion as the action of drugs and the treatment of disease, it is very difficult for a writer to make statements which will not be antagonized and criticised by someone, and the only course to pursue is to think and write according to the knowledge and experience which one possesses. This we believe the author of this work has conscientiously done. Successive editions will no doubt be called for, which will contain all the true acquisitions to modern therapeutics.

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. By HENRY G. PIFFARD, M.D., Clinical Professor of Dermatology, University of the City of New York, etc.; assisted by ROBERT M. FULLER, M.D. With fifty full-page original plates and thirty-three illustrations in the text. New York: D. Appleton & Co., 1891.

THE key to the author's mind in the preparation of this work may be found in the preface, where it is stated that he has endeavored to present the subject "in the most practical manner and with the fewest possible words." There is an absence of theoretical and controversial discussion, and to a considerable extent even of pathological histology. The statements throughout are brief and concise, and in some instances at a sacrifice of the subject-matter. The chapters are for the most part short, many of them too short, we think—some of the more important diseases, as for example, comedo and tinea sycosis, receiving barely a dozen lines. Other well-known diseases, such as ecthyma and pityriasis rosea are altogether omitted from both description and representation. From these observations it will be noted that the work cannot be accepted as a systematic and complete treatise on diseases of the skin. At the same time, while we would have been pleased with a fuller and more complete exposition of the subject, we highly appreciate the work as it stands, and especially the valuable personal experience of the author, which comes out strongly on every page. A few practical points may be referred to. In the treatment of eczema of the scrotum the best three methods are scarification, sometimes followed by surprising relief; the galvanic current; and the application of liquor potassæ. In eczema of the anus the fine point of the Paquelin cautery at white heat is well spoken of; and in acute eczema of the leg and in eczema of the vulva, solution of peroxide of hydrogen is greatly esteemed. As a substitute for tar the following formula is recommended: Salicylic acid, grains x to xx; oil of lavender, ʒiij; oil of citronella, ʒj; oil of eucalyptus, ʒij; castor oil, ʒij. This is especially useful in eczema of the scalp, where tar would be indicated. In general the value of internal treatment is insisted on, and excellent advice is given concerning the use of that potent but dangerous drug arsenic, than which no remedy is more abused in the treatment of skin diseases. The view obtains even at this date, and this too among the best class of general practitioners, that arsenic is generally useful over the whole range of cutaneous diseases: as a result much positive damage to the skin and whole organization is not infrequently wrought. Probably in the majority of cases where used it proves more injurious than beneficial both to the skin and to the tissues generally.

We note that lichen ruber and lichen planus are regarded as distinct diseases, the distinguishing marks of lichen ruber being that the lesions are acuminate and not flattened, lack the central depression, and rarely undergo spontaneous resolution.

Under pityriasis rubra two diseases are described separately, viz., pityriasis rubra (Devergie), and pityriasis rubra (Hebra).

A long chapter is devoted to the new disease called psorospermosis, the author arriving at the conclusion, as concerns the pathology of the disease, that the so-called molluscous bodies, or psorosperms (so far as molluscum contagiosum is concerned), are not animal parasites, but are simply rete cells undergoing a species of corneous degeneration.

The plates consist of photographs taken by the aid of artificial light, which Dr. Piffard regards as preferable for this purpose to ordinary light. The pictures vary in size, some being almost as large as life; they also vary in degrees of perfection, many being remarkably good, while others fail altogether to portray the disease. The best, in our opinion, are eczema of the sole; eczema of the knees; psoriasis resembling eczema; seborrhœa kerativa; icthyosis; and alopecia areata.

We heartily commend the atlas to the profession, feeling that it will prove a valuable addition to the library. The author's long-established reputation is alone sufficient to recommend it to all interested in dermatology. It is a handsome royal quarto volume of one hundred and fifty-six pages, with large clear type, and is printed on heavy, highly calendered paper.

PRACTICAL PATHOLOGY AND MORBID HISTOLOGY. By HENEAGE GIBBES, M.D. Philadelphia: Lea Brothers & Co., 1891.

DR. GIBBES'S established reputation as a master of the technique of microscopy would lead us to anticipate a work of great value. In this we are not disappointed. The chapters devoted to this subject are models of completeness, condensed in such a manner as to render them of the greatest possible value to the laboratory worker. The author's methods of hardening, section-cutting and staining are given in detail, and are accompanied by valuable formulæ for reagents, etc. Celloidin and paraffin infiltration are not mentioned, both of which, in other hands, have proved valuable methods. The method of differential staining of the central nervous system (Weigert's) is not given. Dr. Gibbes very wisely insists that clinical histories be sent to the laboratory with the material to be examined. Many clinicians seem to think that the more their specimens are enshrouded in mystery the more interest the laboratory worker will find in them. The reverse, of course, is true. The chapters on Practical Bacteriology would have been vastly improved by descriptions of tube-plates, bottle-plates, and methods for anaerobic culture.

The chapters on Morbid Histology give wide scope to the author's marvellous skill in photo-micrography, and some beautiful reproductions are made by the photo-electrotype process. We cannot, however, praise the process work, as detail, sharpness of outline and penetration are wanting in nearly all cases.

In theory, Dr. Gibbes belongs to that class of pathologists who ignore the generally accepted microbic origin of disease, and, as a result, his ideas of inflammation, suppuration, tuberculosis and allied conditions are at variance with those of the majority of the profession. The deposit of lime salts in inflammatory and similar processes is discussed as "Calcareous Degeneration." Amyloid infiltration is also considered a degeneration. The definition of neoplasms is faulty, as all its predecessors have been. In fact, it seems to us that, had Dr. Gibbes devoted the space of this portion of the book to a more extended discussion of technique, embracing the examination of the blood, etc., he would have enhanced the value of his work.

The chapter on Photography is replete with excellent formulæ and directions. The necessary dark-room appliances, as well as the room itself, have no mention. The photographs of bacteria are superb, and the remarks upon lenses the most appropriate we have seen.

Taken as a whole, the volume is one of the best upon technique that we possess, and no laboratory should be without a copy.

MATERIA MEDICA AND THERAPEUTICS, WITH ESPECIAL REFERENCE TO THE CLINICAL APPLICATION OF DRUGS. By JOHN V. SHOEMAKER, A.M., M.D., Professor of Materia Medica, Pharmacology, Therapeutics and Clinical Medicine, and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College of Philadelphia; Physician to the Medico-Chirurgical Hospital; Member of the American Medical Association, of the Pennsylvania and Minnesota State Medical Societies, the American Academy of Medicine, the British Medical Association, Fellow of the Medical Society of London, etc.

VOL. II. OF A TREATISE ON MATERIA MEDICA, PHARMACOLOGY AND THERAPEUTICS: BEING AN INDEPENDENT VOLUME UPON DRUGS. Philadelphia and London: F. A. Davis, 1891.

THE first volume of this work on materia medica and therapeutics was published several years ago and was the result of the conjoint labors of Prof. Shoemaker and Dr. John M. Aulde. This second volume, which has just made its appearance, has been the work of Prof. Shoemaker alone and is regarded by him as an independent work devoted to the consideration of drugs, their pharmaceutical preparations, their physiological actions and therapeutical uses.

The author has devoted over 600 pages to the consideration of an enormous number of drugs, many of which, however, have long since ceased to play any part in the modern treatment of disease. According to the announcement each drug is considered in alphabetical order "for convenience of reference for either physician, dentist, or pharmacist, when immediate information is wanted concerning the action, composition, dose, or antidote for any officinal preparation or new remedy."

The description of the physiological effects of drugs is complete and accurate and represents the existing state of pharmacological knowledge. In addition to the ordinary and well-known officinal drugs, Dr. Shoemaker has collected the latest and most reliable information as to the action and uses of all the noteworthy new remedies such as tuberculin (Koch's lymph), spermine (Brown-Séquard), exalgine, bromoform, thiol, pyoktanin and many others.

The therapeutical uses of this long list of drugs is quite extensive, the author apparently having but little sympathy with modern therapeutical nihilism; a great variety of prescriptions and practical formulæ are found everywhere throughout the volume, which are supposed to represent the latest achievements of clinical medicine.

TEXT-BOOK OF OPHTHALMOSCOPY. By EDWARD G. LORING, M.D. Edited by FRANCIS B. LORING. Part II. New York: D. Appleton & Co., 1891.

THE first part of this work, which appeared in 1886, described the normal eye, the methods of determining refraction, the diseases of the media and the theory of the ophthalmoscope. With the exception of a remarkable indifference to the value of retinoscopy, it is a splendid presentation of the subjects enumerated. The volume before us, which has been published under the editorship of Dr. Francis B. Loring, discusses diseases of the retina, optic nerve and choroid, their varieties and complications, and, in spite of the fact that final revision on the part of its author was not possible, is a remarkable book, clear, thorough and replete with new facts and old facts presented in a new light. The disturbances of the vascular system of the eye-ground and the various types of inflammation of the retina occupy more than one-half of the volume. Space does not permit us to take up in detail the quite original method in which this particular field of ophthalmoscopy has been occupied, but we feel that the title of "text-book" does not give an adequate idea of the subject-matter. It really is composed of a series of monographs in which, with singular skill, Dr. Loring has carefully digested the literature of the subject and garnished it with his own admirable observations. Diseases of the optic nerve follow, not quite so thoroughly treated, the presentation of the matter included under the title "Glaucomatous Excavation" being somewhat disappointing. Affections of the choroid, so far as the subject goes, is capital reading, but evidently far from complete. Except in general reference to what the book contains we have not attempted to give an analysis of its subject-matter, which we think the editor was most wise to present without addition and without correction. Practising ophthalmologists might often find statements throughout these pages with which they cannot agree—statements, however, that one would expect from a strong man like the late Dr. Loring, whose vast experience, accurate observation and positive opinions are necessarily presented with the vigorous directness of one possessed of the courage of his convictions. It seems to us that the value of this text-book is that it not only furnishes what is best in the portions of ophthalmology to which it relates, but also what was best in the lamented author's own observation—observation that gave him his high rank among scientific physicians.

HISTORICAL SKETCH OF THE UNIVERSITY OF MARYLAND. By E. F. CORDELL, M.D. Baltimore: Isaac Friedenwald, 1891.

ONE of the most interesting portions of medical history in the United States is connected with the foundation of its medical schools and with the lives of their professors. Dr. Cordell, in a peculiarly happy style, has written about those men who were prominent half a century ago in the medical history of Maryland, and who were naturally connected with the Medical Department of its University. In addition to the ordinary biographies of the Faculty, the author has woven into his narrative enough of the private life of each physician to give one an interesting insight into the ways in which things were done in Maryland fifty years ago by those who were recognized as being in the forefront of social life.

At the end of the book there is a complete list of the graduates of the institution, which is completed by an appendix containing a list of all the provosts, deans, and professors. The engravings and other likenesses which are scattered through the work are unusually good, and the author and publisher are to be congratulated upon the pleasant appearance of their product.

NEWS ITEMS.

Resignation of Dr. James B. Walker.—At a stated meeting of the Faculty of the Woman's Medical College of Pennsylvania, held May 16, 1891, the following action was taken in connection with the resignation of the chair of Practice of Medicine by Dr. James B. Walker:

"The Faculty has received with sincere regret the announcement of the resignation by Dr. James B. Walker of the chair of the Practice of Medicine in this College.

"Dr. Walker held this chair during a period of twelve years, and continuously merited and received the highest appreciation of his colleagues in the Faculty, of the associate teachers, and of the students.

"In all the relations incident to the position he occupied he demonstrated his urbanity, integrity and unusual ability.

"He enthusiastically and successfully fulfilled not only the duties directly pertaining to his connection with the College, but he was also very active and successful as a clinical lecturer at the Woman's Hospital.

"As one of the physicians to the Philadelphia Hospital he greatly enlarged his usefulness to our students by gratuitously extending to them invaluable bedside instruction in that hospital.

"He contributed to the harmonious working of the Faculty and rendered material assistance in advancing the prosperity of the College.

"The exactions of his extensive private practice have influenced Dr. Walker to present his resignation. The Faculty extends to him its best wishes for his continued prosperity and happiness."

To Prevent the Importation of Disease.—Surgeon-General Wyman, of the Marine-Hospital Service, has suggested, as a precaution against the importation of smallpox and other diseases by means of the baggage of immigrants, that the States for which the immigrants are destined be furnished with a list of persons who come in vessels which have been or are infected or which come from ports at which contagious diseases prevail.

The Second Congress for the Study of Tuberculosis will be held at Paris from July 27th to August 2d. The following subjects will be discussed: (1) The Identity of Tuberculosis in Man and Tuberculosis in Cattle, Fowl and other Animals; (2) Association of Morbid Conditions Dependent upon Bacteria with Tuberculosis; (3) The Treatment of Tuberculosis in Hospitals; (4) The Prophylaxis of Tuberculosis in Man and in Animals; (5) Means of Destroying the Tubercle Bacillus without Injury to the Organism, with Reference to the Prophylaxis and Treatment of Tuberculosis in Man and Animals.

Dr. Daniel G. Brinton will represent the American Philosophical Society at the Congrès International d'Anthropologie et d'Archéologie Préhistorique, to be held at Moscow.

Dr. Gabriel Anton, of Vienna, has been elected Professor Extraordinary of Neurology and Psychiatry at the University of Innsbruck.

Royal Academy of Science of Vienna.—Meynert has been elected a corresponding member and Exner an ordinary member of the Royal Academy of Science of Vienna.

The Fourteenth Italian Medical Congress will be held at Siena, August 16, 17 and 18, 1891.

State Board of Health of Kentucky.—At a recent meeting of the State Board of Health of Kentucky, held at Louisville, it was

"*Resolved*, That the Secretary be instructed to place upon the list of medical colleges, the diplomas of which are to be certified to and indorsed for registration under the laws of this State, only such colleges as shall, after the session of 1891–2, exact of matriculates and graduates a minimum of requirements not lower than that required by the American Medical College Association."

The Colorado State Medical Society held its twenty-first annual convention at Denver, Col., June 16, 17 and 18, 1891. A most elaborate programme, including the presentation of a large number of scientific papers, was carried out.

The American Society of Microscopists will hold its fourteenth annual meeting at Washington, D. C., August 10–14, 1891.

Midwives in Hungary.—Professor William Tauffer, of Budapest, considers midwives largely responsible for the high mortality among lying-in women and newborn children in Hungary.

Madame Pauline Maley has bequeathed $8000 to the Association des Médecins de la Seine, for the relief of widows and daughters of medical men who have left their families in straitened circumstances. Madame

Malcy has also bequeathed $4000 to the French Academy of Medicine, for the foundation of a prize for the best work on a subject connected with mental disease.

Convalescent Home.—An anonymous donor has presented to the county of Surrey, in England, a convalescent home for males at Seaford, Sussex. The cost of erection was $75,000; an endowment of $50,000 has been set aside. The house will accommodate fifty patients. The Duke of Cambridge is the president of the institution; the Duke of Connaught and the Duke of Teck, vice-presidents.

The Croonian Lectures of the College of Physicians of London have been postponed, owing to the illness of Dr. Burdon Sanderson, the lecturer of this year.

The Inter-continental American Medical Congress.—At the meeting of the American Medical Association, held at Washington, May 5, 1891, preliminary arrangements were made for an Inter-continental American Medical Congress.

A Committee on Nominations was instructed to nominate one member for each State and Territory, and one each from the Army, Navy and Marine-Hospital Service, to constitute a committee to effect a permanent organization of the proposed Inter-continental American Medical Congress, and to determine the time and place at which it should be held.

The committee appointed by the American Medical Association to effect a permanent organization of the Inter-continental American Medical Congress, met at Washington, May 7, 1891. Dr. Charles A. L. Reed, of Cincinnati, Ohio, was elected Chairman; Dr. J. W. Carhart, of Lampasas, Texas, Secretary; Dr. I. N. Love, of St. Louis, Mo., Treasurer.

The officers were appointed a special committee to draft a constitution, and to report at an adjourned meeting of the general committee to be held at St. Louis, Mo., Wednesday, October 14, 1891, when the time and place of meeting of the Congress will be decided, and permanent officers be elected.

Francis Peyre Porcher, M.D., LL.D.—At the recent commencement of the South Carolina University of Columbia, the honorary degree of Doctor of Laws was conferred upon Professor Francis Peyre Porcher, the distinguished pharmacologist.

Medical Society of New Jersey.—The one hundred and twenty-fifth annual meeting of the New Jersey State Medical Society was held at Long Branch, June 23d and 24th. The President, Dr. James S. Green, delivered the annual address. His subject was, "A View of Modern Surgery from the Standpoint of a General Practitioner." Dr. Edgar Holden, of Newark, read a paper on "Tuberculosis." Dr. E. J. Marsh, of Paterson, was elected President for the ensuing year and William M. Pierson, of Orange, Secretary. The next meeting will be held at Atlantic City in June, 1892.

The Vis Medicatrix is the name of a new publication, to be issued bi-monthly as the journal of the Iowa State Medical Society, and to be devoted to human and comparative medicine. Woods Hutchinson, A.M., M.D., is the editor, and L. H. Pammel, B.Agr., and S. Stewart, M.D., D.V.M., are his associates. The first number bears the date of June 1, 1891, and contains the proceedings of the Iowa State Medical Society, a number of terse editorials, a department of diseases of animals, under the charge of Dr. Stewart, and a department of plant-diseases and bacteriology, under the charge of Professor Pammel. Fifty-five pages of reading matter are presented in excellent form and typography.

Correction.—In the memorandum on "Methods of Staining Bacilli," by C. F. Gardiner, M.D., in THE MEDICAL NEWS, June 13, 1891, p. 668, the quantity of methyl-blue in the second formula given should be fifteen grains, and not, as stated, two ounces.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JUNE 23 TO JUNE 29, 1891.

SKINNER, J. O., *Assistant Surgeon.*—Upon the abandonment of Fort Davis, Texas, will proceed to Fort Clark, Texas, and there take station.

EWING, C. B., *Assistant Surgeon.*—Is granted leave of absence for one month.

CARTER, EDWARD C., *Assistant Surgeon.*—Is relieved from duty at Fort Walla Walla, Washington, and assigned to duty at Fort Canby, Washington.

By direction of the Acting Secretary of War, the leave of absence on surgeon's certificate of disability, granted JULIUS H. PATZKI, *Major and Surgeon*, in S. O. 99, May 1, 1891, from this office, is extended two months on surgeon's certificate of disability.—Par. 15, *S. O. 142, A. G. O.*, June 22, 1891.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING JUNE 27, 1891.

HALL, J. H., *Surgeon.*—Detached from Naval Station, New London, and ordered to Naval Hospital, Chelsea, Mass.

ATLEE, L. W., *Passed Assistant Surgeon.*—Detached from nautical School-ship "Saratoga," and wait orders.

STEELE, J. M., *Passed Assistant Surgeon.*—Ordered to nautical School-ship "Saratoga."

LUNG, G. A., *Assistant Surgeon.*—Ordered to Naval Station, New London, Conn.

PAGE, J. E., *Assistant Surgeon.*—Detached from Naval Hospital, Mare Island, and ordered to the "Independence."

PIGOTT, M. R., *Assistant Surgeon.*—Detached from U. S. Receiving-ship "Independence," and ordered to Naval Hospital, Mare Island, Cal.

FIELD, J. G., *Assistant Surgeon.*—Detached from U. S. S. "Omaha," and granted three months' leave of absence.

BRATHWAITE, FREDERICK GRATTON, of Stamford, Conn.—Commissioned an Assistant Surgeon in the Navy, June 22, 1891.

COMMUNICATIONS are invited from all parts of the world. Original articles contributed exclusively to THE MEDICAL NEWS will upon publication be liberally paid for, or 250 reprints will be furnished instead of payment, provided that the request for reprints be noted by the author at the top of the manuscript. When necessary to elucidate the text, illustrations will be provided without cost to the author.

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